

**How Effective is a Group Based
Motivational Interviewing Intervention in
Promoting Pupil Resilience and
Self-Esteem?**

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Abstract

The research examined the impact of a five week group-based motivational interviewing intervention on pupils' self-esteem and resilience. The Resiliency Scales for Children and Adolescents (Prince-Embury 2007) and The Self Image Profiles (Butler 2001) were used as tools to obtain pre and post measures of pupil resilience and self-esteem. The researcher also explored teacher and pupil views of mental well being and Goodman's (1997) Strengths and Difficulties Questionnaire was utilised to measure this.

The present study is a randomised control trial sampling 48, mixed participants, aged 13-14, in Y8 of a mainstream secondary school. Participants were initially selected via The Self-Image Profiles (Butler 2001) screener and then randomly assigned to either an experimental or wait list control condition.

Statistical analyses indicated a significant increase in the experimental group's levels of self-esteem in comparison to the wait list control group (The Self Image Profiles, Butler 2001). No significant difference was detected on the Resiliency Scales (Prince-Embury 2007) or the pupil and teacher Strengths and Difficulties Questionnaire (Goodman 1997).

Methodological considerations are acknowledged and implications for future practice discussed. Overall, this study offers an insight into the potential of motivational interviewing to positively promote pupil self-esteem when applied across educational contexts with children and young people.

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Introduction

The current study is a randomised control trial exploring the impact of a group based Motivational Interviewing (MI) intervention on Y8 pupils' self-esteem and resilience.

The chosen research study offers a unique contribution, as it is the first randomised control trial to be employed in an educational setting, utilising a MI approach with children and young people.

As a Trainee Educational Psychologist, the researcher became interested in the concept of MI following various opportunities at university and in the researcher's Educational Psychology Service, to examine the theoretical underpinnings and further rehearse and practise elements of the approach.

MI is an interesting concept that attempts to engage individuals through using a non-directive, goal-oriented, humanistic approach (Miller and Rollnick 2002) and one that may well be appropriate in promoting social inclusion. It is set apart from many other change-promotion interventions because it does not simply assume that everyone is ready to accept change. Extensive amounts of research have demonstrated its effectiveness when applied with individuals in the field of health and addictive behaviours (Rollnick et al 1992 and Gray, McCambridge and Strang 2005). More recently, its success in education has been reported, although this evidence base is relatively small and the studies that have been undertaken have comprised of small scale, individual cases studies (Atkinson 2005). Hence, the researcher's decision to formulate a study evaluating the effectiveness of a MI intervention in an educational setting, as this could contribute to the growing field of research.

The researcher intends to implement Atkinson's (2005) package 'Facilitating Change', which is based upon the key principles of MI. The materials comprise of a well-structured five session programme that encourages young people to think about and change aspects of their behaviour. The sessions

involve activities that aim to build rapport with a young person and ask them to consider how people around them affect their behaviour. The later sessions then explore the importance of motivation in changing behaviour and encourage the young person to evaluate their own conduct in relation to the stages of change. The programme can be used universally, but has been particularly effective when implemented with vulnerable young people (McNamara 2009).

The questions that the researcher intended to address are highly relevant to the profession of educational psychology, with the underpinnings of the intervention based upon humanistic, rogerian and behavioural elements of psychology (Mcnamara 1998). The field of mental health and emotional well being is also currently a very topical issue, along with the government drive for social inclusion. There is limited research on the use of MI in promoting resiliency and self-esteem and as the literature suggests, pupil resilience may be promoted through adopting positive motivational styles (Newman 2004). These hypothesised links and their rationale will be explored further throughout.

Collaboration with key stakeholders was necessary when negotiating the research questions and design of the current study. Along with the researcher's own interests and ideas, consideration had to be given to Nottingham University's requirements for doctoral research, Local Authority and Educational Psychology Service priorities and the needs of the school who took part in the study. This meant that the researcher had to devise a study that fitted within the expectations of all of these stakeholders.

As the researcher's university is part of a Development and Collaborative Research Project, Trainee Educational Psychologists were offered 4 key priority areas to choose from when devising their research which reflected both local and national priorities. The researcher had to therefore formulate a research question and design idea that was integral with a priority area. Furthermore, all practitioners were required to utilise Goodman's (1997)

Strengths and Difficulties Questionnaire (SDQ) as part of their research and this would therefore need to fit appropriately within the research design.

The researcher further considered the school in which the study took place as a key stakeholder in the process. Discussions with both the Head Teacher and the Pastoral Support Leader took place and further focused upon the feasibility and pragmatics of implementing a MI intervention within a school setting. The school felt that a MI intervention would meet their needs and be an extremely beneficial approach that may engage some of their pupils. They expressed concerns generally, regarding a number of pupils who they felt had a poor self image and low levels of self-esteem and who may benefit from the intervention, particularly as many appeared unmotivated and reluctant to consider change. The school were keen to learn more about the MI package and its delivery so that they could continue to implement it across the school once the study had ended. This discussion therefore helped to inform and drive the target group for the intervention.

During the implementation of the study, the school underwent an Ofsted inspection and were issued with a notice to improve. This meant that, contrary to plans, the Pastoral Support Leader was then unable to attend all of the MI sessions, as she was involved in a number of other development meetings. Relationships within the school appeared strained as regular review meetings were arranged to discuss the school's progress and members of staff were also given heavier workloads and were undertaking multiple roles. Unfortunately, this meant that the researcher's communication with the school suffered, as the study was not seen as a priority for them at that time. As research design literature highlights, this is just one example of a number of documented issues that applied researchers may face when grappling with real-world constraints (Robson 2002).

An Overview

The study will be presented in the structure outlined below.

Chapter One, the literature review, provides the reader with an overview of pertinent research and evidence in the field of social inclusion and emotional health and well being. This follows with more specific literature around the concepts of resilience, self-esteem and motivated learning. Finally, a detailed exploration into the underpinnings of the intervention applied in the present study and research supporting its effectiveness to date is given due consideration.

Chapter Two describes the proposed research design and considers various methodological issues, drawing upon a number of epistemological perspectives and principles. The researcher's position in real world enquiry is further discussed.

Chapter Three outlines the study's descriptive and statistical findings. The researcher further reflects upon the key discoveries in relation to previous literature and the hypotheses and research questions the study intended to answer in Chapter Four. Implications for future practice are also considered.

Chapter Five summarises the main conclusions and considers the study's contribution to research and knowledge. Contemplation is also given to opportunities for further research.

Chapter 1 - Literature Review

1.1 Introduction

The area of resilience and self-esteem has attracted much attention over the years and links closely with the field of social, emotional and mental health (Blake, Bird and Gerlach 2007). It is generally agreed that children who establish positive self-resilience have the capabilities required to bounce back from adversity and change. Forming positive relationships in social contexts are important aspects of this process and recent research advocates the benefits this can have in promoting social inclusion in schools (Luthar 2003).

MI is a client-centred counselling intervention that has proved successful when used across a variety of contexts (Atkinson 2005, McNamara 2009). Most of the research however, has developed through the field of health and addictive behaviours (Miller and Rollnick 2002). Thus, limited data currently exists on its impact on education and the research that does exist advocates the need for more to be carried out (McNamara 2009). Children with poor resilience and self-esteem may feel that their perceptions and desires are not taken into consideration by others and MI aims to enhance these feelings through promoting positive change (Miller and Rollnick 2002).

The current review aims to explore and critique the research and literature in this area and further provide a rationale for the research study that is to be undertaken by the author. The search strategies employed to gather evidence and research will initially be discussed and this will follow with a comprehensive review of the key findings. Reasons for undertaking research in this area along with an outline of the specific research questions that the author intends to investigate will follow.

1.2 Search Strategies Employed

Google Scholar

The author initially used Google Scholar when searching for articles and typed in 'Motivational Interviewing experimental studies'. This revealed 10,700 hits. The author carefully looked through the first couple of pages and excluded any pieces of information that were not studies. Policies, opinion pieces, chapters from books and surveys were all disregarded and not included in the searching criteria. Several abstracts and articles of particular interest were examined thoroughly.

The author also typed in 'Group Based Motivational Interviewing' (24,900 hits), 'Motivational Interviewing studies that aim to promote self-esteem and resilience' (524 hits), 'Randomised Control Trials and Motivational Interviewing' (16,000 hits) and 'Randomized Control Trials and Motivational Interviewing' (16,500). The latter search led to an article that had undertaken a systematic review and meta-analysis of randomised controlled trials using motivational interviewing as the intervention. The authors searched 16 databases and produced 72 randomised controlled trials all published from 1991. Google and the DFES website were also used to search for key government publications under the terms 'social inclusion' and 'mental health and emotional well being'. The author initially wanted to search for UK studies only, but as this did not reveal enough hits, the search was expanded beyond the UK.

University Of Nottingham Online Search Facilities- UNLOC

The author also used the university Meta Search database accessible through the library online catalogue. The Meta Search comprises of 8 different databases under the categories 'Science, Psychology'. These are ASSIA, EMBASE, Intute, PSCI-Com, CSA, PsycINFO, UNLOC, Web of Knowledge and Web of Science.

Key words such as 'Motivational Interviewing studies' were inputted into the database and this revealed 187 hits. The author then more specifically typed 'Motivational Interviewing experimental studies' and this revealed 86 hits. 'Motivational Interviewing' alone produced 3596 hits. 'Motivational Interviewing in schools' produced 60 hits. Articles were selected using the author's inclusion and exclusion criteria (See table 1a below). The author was again initially keen to examine studies undertaken only in the UK; however after several different searches revealing limited results (32 hits) and as a lot of the research has also been undertaken in America, it was decided to extend the search beyond the UK. Key words such as 'pupil resilience', 'pupil self-esteem' and 'pupil's emotional well being' were also searched for through the databases.

Inclusion and Exclusion Criteria

Table 1a: Inclusion and exclusion criteria for the literature search strategy employed

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> • Studies in the UK and beyond • Randomised Control Trials • Control / experimental groups • Random allocation • Pre and post test measures • Abstracts and full articles • Articles found through other articles references • Motivational interviewing (MI) techniques/ studies that have been used across health, education and counselling domains • Individual and group-based studies of MI • School-based studies of MI/resilience/self-esteem • RCT intervention studies that aim to promote self-esteem and resilience 	<ul style="list-style-type: none"> • Opinion pieces • Policies • Surveys • Abstracts that provide little information about the design / methodology

Other Search Strategies Adopted

In addition to the online search undertaken, the author also used reference lists from journal articles to maximise the investigation further. The author visited the Nottingham University library for books in the key areas of the research: self-esteem, resilience, mental health, emotional well being and motivational interviewing. Key government publications that are highly relevant in this area were also examined in detail, including Every Child Matters (DCSF 2004), Leading schools to promote social inclusion (NCSL 2007) and the Targeted Mental Health in Schools Project paper (DCSF 2008).

As described above, the author utilised a number of different sources and search strategies when examining the literature in the field of interest. Let us turn now to look more closely at the key findings. The author intends to begin with an exploration of the broad topical area that the study falls within, that of social inclusion and acceptance. This will follow with a more specific focus in the key areas of interest and their importance and will finish with a discussion around the reasons for undertaking research in this area.

1.3 Promoting Social Inclusion and Mental Well Being

‘Social skills are those behaviours that occur in specific social situations which predict important social outcomes for children and youth. In most settings relevant to children, important social outcomes may include: a) peer acceptance, b) significant others’ judgements of social skills, c) academic worth d) positive feelings of self-worth and e) positive adaptation to school, home and community environments’

(Gresham and Elliott 1993, p.139).

Promoting pupil inclusion, social adjustment and acceptance in school is a key government agenda and strong links have been made with the positive impact this can have on school achievement (Wentzel and Asher 1995).

As the University of Nottingham are involved in a national collaborative research project, the researcher was initially offered the choice of four priority areas to choose from when devising the current research. The broad research question chosen was as follows:

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

The author therefore chose to undertake research in the field of social inclusion, implementing a targeted intervention based upon motivational principles to elicit change, whilst investigating the impact it had on pupil self-esteem and resilience.

The author now intends to explore more specifically some of the proposed definitions in the field of mental health and emotional well being, whilst further considering what factors support a positive approach to mental health prevention.

1.4 Definitions

'The 1999 Mental Health Foundation report *Bright Futures* defined children who are mentally healthy as able to:

- develop psychologically, emotionally, intellectually and spiritually;
- initiate, develop and sustain mutually satisfying personal relationships;
- use and enjoy solitude;
- become aware of others and empathise with them;
- play and learn;
- develop a sense of right and wrong; and
- resolve (face) problems and setbacks and learn from them'.

(Mental Health Foundation 1999, p.8).

The Health Education Authority (1997) further summarised mental health as 'the ability to use psychological distress as a development process' (HEA p.15) whereas others take a more biological stance and regard it as 'the ability of the mind to heal itself after shock or distress' (Jenkins, McCulloch and Parker, 1997 p.5).

Many professionals encounter challenges when attempting to define 'mental health' however, it is a complex concept and an individual's construal will be highly dependent upon their values, assumptions and preconceptions. For example, Tudor (1996) put forward four paradigms of mental health, emphasising that it is a socially constructed and defined notion. 'Different professions, communities, societies and cultures have very different ways of conceptualising its nature and causes, determining what is mentally healthy, deciding what interventions are appropriate and so on' (Weare 2003 p. 13).

Some theorists regard mental health as being on a single continuum and others prefer to conceptualise mental health and mental illness as two continua (Trent 1992). Weare (2003) suggests that although mental health

can be a difficult concept to define, we cannot just conclude that is impossible, or that one paradigm is more preferable than another.

Evidence clearly indicates that effective mental health intervention programmes focus on more than one feature. These crucial factors include:

- involvement of the social network of the target group e.g. families, friends, communities
- a combination of methods e.g. social support and tools to aid coping skills
- intervention at various times (not just on a one off occasion)

(Cowie, Boardman, Dawkins and Dawn 2004).

'Health promotion is essentially a social discipline: by definition it focuses on the wider structures and actions that promote health rather than just restricting itself to an individualistic focus' (Weare 2003 p. 21). It seems apparent to the author, that a holistic perspective of mental health is appropriate given that mental, emotional and social health are regarded as being key areas for school health promotion, with more schools adopting health promoting frameworks (WHO 1998). Considering all external factors and influences appears to be an important step forward in mental health promotion, along with the need to involve individuals' families and communities wherever possible (Weare 2000).

Adi, Killoran, Janmohammed and Stewart-Brown (2007) undertook a systematic review of the effectiveness of school-based interventions in promoting mental well being in pupils. 31 studies were included in the review, 15 of which were randomised control trials. Adi et al (2007) reported in their findings that more UK based mental health promotion programmes and further data supporting the cross cultural application of some of the interventions described is required. Adi et al (2007) further highlighted, through their findings, that although short term interventions are effective for a diminutive period, a good degree of evidence suggests that long term

interventions covering social problem solving, social awareness and emotional literacy, with teachers reinforcing the curriculum in all interactions with pupils, are valuable in the long term even when delivered alone. They further advocate the importance of gaining parental support with mental health promotion interventions in school.

However, it must be noted that this review focused heavily upon interventions implemented in primary schools and there is a need for more research to be conducted across the field in secondary settings. The author is acutely aware of the lack of evidence in this area hence, Adi et al's (2007) findings have helped inform the present study, which is going to be a targeted intervention applied specifically in the secondary age phase, exploring the impact MI has on pupil resilience and self-esteem.

Cowen, Trost, Lotion, Dorr, Izzo and Isaccson's (1975) research reported that children in the age range 8-9 years, who were rated negatively by their peers, were most likely to develop mental health issues later on in life. Kupersmidt, Coie and Dodge, (1990) further support these findings and reported how pupils who were socially rejected by their peers in primary school experienced academic, discipline and truancy concerns when they entered secondary school. More recently, key studies have highlighted the importance of the classroom environment and the effect it can have on social acceptance and inclusion and suggest a more holistic approach is necessary (Frederickson and Furnham 1998). Current research further regards the ages of 11-15 as critical in the development of mental health issues and reported that in 2004, 10% of children in this age phase had a clinically diagnosable mental disorder. Further studies suggest that this can often lead to problems and negative outcomes later on in life. (Frederickson, Dunsmuir and Baxter 2009).

Bronfenbrenner (1979) regarded the environment as an extremely important influence on a child's development, but he also believed that 'the context of development is not just the family, but the geographical, historical, social and political setting in which the family is living' (Coleman and Hendry 1999, p.2).

Bronfenbrenner used the term 'social ecology' to describe the social influences and systems that may impact on a child's development. He advocated the importance of working systemically and further described how a breakdown in an adolescent's social network system can lead to impairments in mental health, social conduct and educational performance (Bronfenbrenner 1989).

Mental health promotion can be defined as 'a kind of immunisation, working to strengthen the resilience of individuals, families, organisations and communities as well as to reduce contradictions that are known to damage mental well being in everyone, whether or not they currently have a mental health problem' (HEA 1997 p. 13). The current intervention study also aims to promote individuals mental well-being through enhancing their levels of resilience and building their self-esteem.

Reflecting upon the literature reviewed in this section, the author concludes that a holistic approach to mental health promotion is more appropriate, considering not only the individual but their surroundings, with the school and community playing a key role.

The author now intends to explore more closely the importance of school factors in the promotion of mental health and emotional well being.

1.5 School Factors

Considerable amounts of data in school exclusion research has illustrated that significant differences in management styles determine a school's inclusiveness (Munn and Lloyd 2000). For less inclusive schools, the primary focus was on the academic achievements of pupils who were engaging with education, in contrast to more inclusive schools that strive to promote both the social and academic achievements of all pupils. Offering a flexible curriculum, increased staff support, collaborative working, good relationships with parents and joint problem solving, with regards to exclusion policies, were reported to lead to more successful outcomes. Difficulties arise

however, if pupils are unwilling to engage with any of these strategies and 'in order to benefit from this specialised curriculum, the pupils need to be motivated: when they are not, motivation has to be elicited' (McNamara 2009, p.45).

The Every Child Matters publication (DCSF 2004) aims to promote pupil mental health and well being by clearly outlining five national outcomes that schools are expected to adhere to. These are: being healthy, staying safe, enjoying and achieving, making a positive contribution and economic well being. Ofsted produced a report in July 2005 following research across 72 schools and this led to them emphasising the crucial role schools can play in promoting pupil's mental health and emotional well being. The report advocated the need for clear procedures in identifying and promoting this in schools, reporting that only a small number were in fact addressing issues in this area. Ofsted advocated that staff training was necessary in raising awareness and further developments in multi-agency working, particularly the need for the use of a common language was suggested. The Every Child Matters publication: Leading Schools to Promote Social Inclusion (2007) describes social inclusion as being on two levels. 'At one level it can be viewed as the extent to which various practices promote or limit cultural or economic integration and the meaningful participatory access of social groups and individuals in mainstream society. At another level it can also mean the way different individuals and groups are given recognition for who and what they are' (NCSL 2007, p.3). A key priority for developing social inclusion previously focused on raising pupils' attainment, but now encompasses the need for parental and community working and support, offering various services to ensure that this is effective.

As a result of their research, Ofsted made the following recommendations:

'Schools and other settings should-

- Use the DfES national guidance on mental health difficulties to develop clear procedures that are known and used by all staff, for identifying and supporting pupils

- Ensure that issues concerning mental health are tackled successfully, either through the National Healthy School Standard (NHSS) programme or the PSHE curriculum
- Establish arrangements for preventing bullying and promoting positive relationships and monitor their effectiveness
- Work together to ensure that the DfES guidance is disseminated to all staff.

(Ofsted 2005, p.3).

As this study was only undertaken across 72 schools, further rigorous studies with larger sample sizes are necessary to support and critique these findings. Interestingly, most of the LEAs were reported to have been 'randomly selected', but one was actually chosen due to its reputation of good work in the area of emotional health and well being which raises questions over the credibility and generality of the data collection. More recently however, The Department for Children, School and Families (DCSF) have issued a new publication 'Targeted Mental Health in Schools Project' (DCSF 2008) that aims to transform and develop the effectiveness of how mental health support is delivered in schools and strives to promote social inclusion. This publication is based heavily on evidence-informed practice and resonates well with the NICE (2008) guidelines on promoting social and emotional well being in primary schools. Following a systematic review of experimental studies, the report highlighted that raising awareness of emotional literacy, social problem solving and social awareness, along with whole school approaches involving the family and the community, are vital components of promoting emotional health and well being in pupils.

Krzywosz-Rynkiewicz (2006) conducted a research study in Poland exploring whether the pupils who take a pro-active part in their school social life are popular with their peer group and reported that moderate pro-activity overlaps with high social attractiveness. Interestingly, they found that pro-active children were considered the least socially attractive by peers. In comparison, Krzywosz-Rynkiewicz's findings suggested that social

attractiveness is not affected by pupils who show signs of low pro-activity criticising other findings that suggest low social engagement is a predictor of low popularity and/or rejection. However, there are several limitations when considering the outcomes of the above study. There was only a small sample size involved and a lack of equivalence with the participants in the study. Also, the author's own criteria and definition of pro-activity was criticised and the fact that only several questions were actually used to describe 'typical school behaviour'. Future research to support and critique these findings is therefore clearly required as other research would argue that a breakdown in a pupil's social network system and peer relationships could ultimately lead to mental health and attainment issues later in life (Bronfenbrenner 1989, Cowen et al 1975). The present study further aims to promote pupils' emotional well being through a targeted intervention, in a supportive group based setting.

Numerous intervention programmes aimed to promote social skills and acceptance are widely available and implemented into school routines. Three of the most common programmes used are based upon reinforcement, shaping and modelling, where rewards are used to praise desirable behaviours and often modelled step by step by an adult/classmate. Coaching focuses on pupil's social perception and cognition and is frequently used for preventative/developmental purposes. Pupils are trained what to do at each stage, with opportunities for rehearsal and social problem solving. (Frederickson and Cline 2002).

Spivack, Platt and Shure (1976) described social problem solving interventions as comprising of 4 key steps: problem identification and goal setting, generation of alternative solutions, consideration of consequences and decision making and finally, making plans and checking for success. Although several studies have reported successful outcomes in the use of social problem solving interventions, some theorists have reported no apparent changes in social behaviour and/or acceptance within an individual's peer group (Pellegrini and Urbain 1985).

The government drive for social and educational inclusion in schools is an important one. They further advocate the need to reduce the number of pupils being excluded. Numerous interventions targeting this issue have been implemented and evaluated as discussed above, but if pupils are not willing to engage with these programmes they will have limited success. Research has further demonstrated the importance of the school in promoting pupils' mental health and emotional well being. Interventions need to work on and elicit an individual's motivation for them to fully engage (McNamara 2009). The intervention applied in the present study aims to do that and is to be implemented in a school based setting.

1.6 Resilience, Emotional Health and Well Being

In this section, the author intends to review the literature and research in the field of resilience, emotional health and well being, particularly examining the importance of promoting this in schools. Several studies that have been undertaken in this area will further be discussed and critiqued, including a more recent systematic review of school based interventions aimed at promoting mental and emotional well being. Links with the justification for the present study will also be made.

'The operational definition of resilience has varied considerably over time as hardiness, optimism, competence, self-esteem, social skill, achievement or the absence of pathology in the face of adversity' (Prince-Embury 2007, p.1). More common definitions believe 'resilience refers to the multidimensional, dynamic process of positive adaption to adversity. It is the ability to bounce back from adversity and change and involves internal and external adjustments to risks' (McGrath and Noble 2007, p.10). These definitions regard resilience as a process not a trait.

Research into the area of resilience has become more extensive over the past twenty years and although it has produced mixed findings, all studies

regard this area of significant importance. After all, it seems to account for why some children overcome such difficulties and challenges, whereas others are victim to their early experiences (Prince-Embury 2007). The research has gone beyond only examining high-risk populations and advocates that there is a need for such research across the board, as all children and young people face some pressure or stress throughout their youth, particularly as some would argue that children today are now living in a more restrictive environment with increased adult supervision, creating limited opportunities to develop coping skills and independence (McNeish and Roberts 1995). Rutter (1993) argues that although there is much evidence demonstrating how resilience emerges, more evidence is clearly needed to support how we can actually influence these processes. Particularly research around resiliency theory and its practical applications is only a recent phenomenon (Rayner and Monatgue 2000).

Newman (2004) argues strongly why we must focus on developing and promoting our knowledge of resilience:

- 'Resilience is a quality that helps individuals or communities to resist and recover from adversities.
- Over the past few decades, children's psychosocial health has declined in all developed countries.
- Child welfare services have become preoccupied more with risk factors than with factors that keep children safe and healthy.
- At present, our understanding of the processes that promote resilience is more extensive than our range of practical applications.'

(Newman 2004, p.5).

Some children are reported to be at an increased risk of developing mental health difficulties and these are often described by a set of risk and protective factors. Difficulties within the individual, family and/or the environment are all argued to contribute towards poor self-resilience

(International Resilience Project, Grotberg 1997). Grotberg's (1997) study of over 600 children identified that death of a family member, divorce/separation, parental illness, poverty, moving home, accidents, abuse, abandonment, remarriage and/or homelessness as common adversities impacting on a child's resilience. Luthar (2003) further states that positive relationships and engagements in social contexts such as school are highly necessary in developing positive self-resilience and self-esteem, particularly forming good relationships with peers and other adults. Emotional support, warmth, a positive attachment to at least one caregiver and cohesion, have also been identified through research studies as protective factors in the child's environment that may influence their resiliency (Luthar and Zelazo 2003). The DCSF (2008) publication 'Targeted Mental Health in Schools Project' further supported these findings and reported a number of major risk and resilience factors in the child, in the family and in the community, all of which are significant predictors of a child's mental health. Interestingly, they reported that being female was in fact a resilience factor.

The evidence around resiliency and gender differences however, demonstrates mixed findings. Hair et al's (2001) research found that females were more adjusted and less likely to display behaviour difficulties than males, However, Aaronson and Sirpa (1998) criticised these claims and their study highlighted no significant gender differences. Werner (1995) reported that positive parenting styles influence girls' resilience more so than boys, whereas male role models, more supervision and encouraging emotions, appear more important in building male resilience. More recently, Maclean (2003) reported pre adolescent boys to be less resilient than pre adolescent girls, but this changes post adolescence as boys become more resilient.

Recent research advocates that 'bringing about improvements in children's mental health at the population level needs to involve tackling risk and promoting resilience' (Frederickson, Dunsmuir and Baxter 2009, p.1). Targeted intervention strategies are used to promote and develop resilience and positive mental health and have been described as successful approaches that minimize psychological dysfunction. It is argued that

children can develop skills through interventions to enhance their resiliency in areas of self-confidence, emotional regulation, problem solving and empathy. Difficulties can arise, however, when defining complex concepts such as resilience and self-esteem, as an individual's social construction can create problems in accurately assessing and measuring progress. Such conceptualisations appear to vary over time (Schoon and Bartley 2008). It is therefore important that researchers utilise measures that have a high amount of reliability and validity, are used in a suitable context, and are in fact measuring what they claim to. These issues will be explored further in the Methodology chapter.

'Schools are one of the key arenas for the promotion of resilience.... children who face particular obstacles, notably those with emotional and behavioural problems, need additional help to achieve mastery of tasks, rather than directing their energy towards the subversion of achievement and the reinforcement of learned helplessness' (Maden and Hillman 1996, p.59). Gilligan (2001) further reported a link between increased resiliency and higher levels of self-esteem. A common, widely acknowledged belief is that pupils will learn and engage more in school if their emotional health and well being are promoted in a proactive and positive way (Blake, Bird and Gerlach 2007). Further research at the psychological level, suggests that developing a sense of mastery or self-efficacy is reliably associated with resilience (Cowen et al 1997). One of the core principles of MI is to promote self-efficacy and the author therefore believes that it may be a suitable intervention to enhance pupil resilience.

Individual psychological characteristics, social and economic factors and access to good quality education and recreational opportunities have all been described as good predictors of resilient outcomes in children (Cove, Eiseman and Popkin 2005). Several models of resiliency have also been devised to account for how such factors may ultimately lead to positive outcomes for children. Compensatory models describe how certain factors, e.g. high self-esteem, neutralise the negative consequences of exposure to risk, e.g. overcoming stress. Challenge models advocate how difficult

experiences that are dealt with successfully may equip children with the ability to deal with future problems. Finally, protective factor models, which incorporate both the above, describe how protective factors may potentially influence outcome (Cove, Eiseman and Popkin 2005).

‘Although much of the research on resiliency assumes a constant level of risk within samples based on economic or social thresholds, many authors conclude that, in reality, individual experiences of risk varies considerably’ (Cove, Eiseman and Popkin 2005, p. 4). A further study undertaken by Werner and Smith (1993) found that it was those children who were exposed to multiple risk factors that usually faced more negative outcomes. Rayner and Montague (2000) however, advocate the importance of actively promoting children’s emotional well being, rather than simply focusing on reducing the risk factors.

Cove et al’s (2005) study into resilient children described a resilient child as one with no behavioural difficulties, not being involved in delinquency and being well engaged in school. They also further reported that parental characteristics had a huge influence over individual success, particularly parents who were involved in their child’s education and who played an active role in supporting them. Nord and West (2001) reported similar findings.

Further research suggests that a child’s social competence can determine how resilient they may be and ‘children whose parents report that they are admired and well liked by other children are about five times as likely to be resilient than other children’ (Cove, Eiseman and Popkin 2005, p.11). Doll, Zucker and Brehm (2004) advocate the importance of schools establishing ‘resilient classrooms’ for their pupils. They describe how schools must promote pupils self-efficacy and beliefs that they can achieve and be successful, ensuring pupils have personal goals, learn to identify and solve problems and make their own decisions regarding their own behaviour. Doll, Zucker and Brehm believe that pupils need to be taught these principles in a supportive classroom environment. Brown (2001) defines a ‘resilient

education' as a curriculum promoting 'decision-making capacities in the context of a democratic learning community, rather than an environment that is concerned with the management of risk through regulation' (Brown 2001, p.58). Such an education aims to develop a pupil's conflict resolution skills, a stronger internal locus of control and involve parental and community support.

1.7 Emotional Intelligence

Emotional intelligence involves individuals developing an awareness of their own emotions and recognising those of others. Salovey and Mayer (1990) advocated that there are five domains that comprise emotional intelligence: self-awareness, managing emotions, self-motivation, empathy and relationship skills. Goleman (1995) furthered this thinking and interpreted it more specifically as knowing ones emotions, managing these emotions, motivating oneself, recognising the emotions of others and handling relationships. Theorists advocate the importance of promoting emotional literacy in schools to increase individuals' capability to access and process emotional states. Developing this leads to an improvement in emotional understanding and well being through the development of relationships and communication, meaning individuals experience richer learning opportunities (Antidote 2003). Antidote further argued that by creating an emotionally literate environment, schools will create a more positive ethos to teaching and learning and promote collaborative relationships, whilst reducing conflict and distress.

There are almost eight million children and young people currently attending UK schools and these pupils spend approximately 15,000 hours of their life there (Adi et al 2007, Rutter et al 1979). This highlights the strong influence school can have upon a child's development, particularly as there is a reported increase in pupil psychosocial difficulties and distress (Rutter and Smith 1995, West and Sweeting 2003).

Promoting Alternative Thinking Strategies (PATHS) is an intervention aimed at promoting emotional intelligence in pupils. It is a 60 lesson programme comprising of elements on self-control, emotions and problem-solving and the sessions focus heavily upon the relationship between cognitive-affective understanding and real-life situations. Greenberg et al (1995) evaluated this programme in the US and reported that it influenced pupils' fluency in discussing basic feelings and their beliefs about managing these, demonstrating vast improvements. These findings suggest that cognitive knowledge about emotion can affect how we act and engage with others. This study along with others advocates the importance of adopting whole school approaches in promoting mental and emotional well being, to ultimately have a positive influence upon everyone's mental health, rather than to target specific individuals.

Curtis and Norgate (2007) piloted the PATHS intervention in the UK following its success in promoting the emotional literacy of pupils in the United States. The study comprised of 8 schools involving 287 participants (5 schools implemented the intervention and 3 schools formed a wait list control group). The targeted age phase was Reception and Year 1. Goodman's Strengths and Difficulties Questionnaire (SDQ) was used as a pre and post measure and these results highlighted a significant difference for those pupils who received the PATHS intervention, showing considerable improvements. Further qualitative measures applied in the form of semi-structured interviews illustrated the momentous impact the intervention had on promoting pupils' emotional and behavioural development.

Criticisms of the study however, include potential observer bias on behalf of the teachers completing the SDQ's, as they were fully aware of the aims of the PATHS intervention from the start and this may have consequently influenced their responses. It must also be noted that there were more pupils identified with emotional and behavioural difficulties in the experimental group than the wait list control. This therefore leads the author to question whether the success of the PATHS intervention lies solely with children who present with emotional and behavioural difficulties, having only a limited

impact upon pupils with no such difficulties and is something that must be explored further, along with the long term follow up effects of the intervention.

A high degree of parental support leads to fewer psychological and physical symptoms in adolescence (Wickrama, Lorenz and Conger 1997). Parental emotional support is defined as 'gestures or acts of caring, acceptance and assistance that are expressed by a parent toward a child' (Shaw et al 2004, p.4). Findings suggest that a lack of parental emotional support in childhood leads to significant difficulties such as depression in adulthood. Higher emotional intelligence is associated with improved psychological functioning and studies suggest that parental love in childhood contributes to the development of a child's emotional intelligence (Mayer et al 2000).

Sillick and Schutte (2006) investigated the extent to which perceived early parental love is associated with happiness levels in adulthood and investigated whether emotional intelligence and self-esteem mediate this relationship. The results based upon a study undertaken in Australia with a sample of 88 adults demonstrated that greater perceived parental love was associated with higher self-esteem and happiness in adulthood, further supporting earlier studies that suggested parental support leads to increased happiness in adolescents. Higher emotional intelligence and higher self-esteem were associated with greater happiness. Limitations with the current study however, include the fact that the clients were all asked to recall early childhood experiences from memory, some of which could have been easily forgotten or misinterpreted, particularly as some of the participants were older. Participants may also have felt uncomfortable disclosing some of their early experiences and therefore not given an accurate account. The direction of causality in correlational studies is also difficult to interpret and further longitudinal studies are needed to provide more evidence.

There has been very little information provided on resiliency studies conducted in the UK. The more recent Penn Resiliency Project, set up in 2007-2008 (Gillham and Reivich 2008), aims to adapt the principles of the programme for use in the UK. The programme aims to deliver training to

teachers on promoting resiliency skills in their pupils and intends to evaluate the training on a wide scale measure. It is a group based intervention that teaches cognitive behavioural and social problem solving skills to pupils. As it is a relatively new programme however, sufficient time needs to be given for it to be fully evaluated.

Reflecting upon the literature reviewed in this section, evidence highlights the importance of promoting pupil resilience and well being in school. Targeted interventions have proved highly successful along with parental and teacher support and this has helped further inform the present study, as it will also be a targeted intervention study aimed at promoting pupil resilience and self-esteem.

1.8 Self-Esteem

The following section aims to explore the ample research in the field of self-esteem and motivated learning. Particularly, factors that have been reported to influence pupils' self-esteem will be discussed, along with more recent research reporting a significant link between self-esteem and the four mindsets of motivation.

Self-esteem is a thoroughly complex human characteristic and many theorists have put forward different definitions of the term. Generally it can be defined as 'how we positively or negatively feel about being ourselves. It is the value we place upon ourselves as a unique and valuable human 'being' rather than a human 'doing'. It depends on how well we know ourselves, the extent to which we feel we are accepted, and on our belief that we can exert an influence over other people and the world' (Morris 1997, p.3).

A comprehensive study undertaken by Coopersmith (1967) reported three factors that led to the promotion of self-esteem in children. Coopersmith described an increase in self-esteem as being down to the carers who love and value their child whilst setting firm, fair boundaries and providing opportunities for their child to be involved in decision-making. It has

subsequently been suggested that aggressive and irresponsible parenting can significantly reduce a child's self-esteem levels, implying that the presence of others is a vital determinant in the shaping of one's self-concept, both positively or negatively. Extensive research has demonstrated that individuals with high self-esteem have more positive, clearer views about themselves than those with low self-esteem (Campbell 1990).

Further studies have also demonstrated how an individual's self-esteem is entirely reliant upon the attitudes of others, primarily their parents (Marsh, Relich and Smith 1983). Particularly, hostile parenting has been linked with low self-esteem (Farrington 1993). Farrington highlighted the importance of the intergenerational hypothesis and how authoritarian parents who act in an aggressive manner, are likely to cause their child to model such behaviour, chiefly in their interactions with others.

However, it has also been suggested that such belligerence can consequently disrupt the development of a child's self-esteem, causing it to slowly decrease (Lawrence 1988). Highly aggressive children with low self-esteem who exhibit such behaviours in the peer setting are classed as anxious bullies (Bowers 1994) and are reported to share the same characteristics as those of the victim. Nonetheless, it is important to illustrate that not all children from authoritarian families inevitably develop low self-esteem or automatically become a perpetrator of bullying. One must take into consideration other factors such as individual characteristics and the severity of the hostility being experienced (Sullivan 2000).

Butler (1970) also regarded a child's peers as vital in their social and emotional development. 'The self is something which has a development, it is not initially there at birth, but arises in the process of social experience and activity, that it develops in a given individual as a result of his relations to that process as a whole and to other individuals within that process....The self, as that which can be an object to itself, is essentially a social structure and it arises in social experience' (Mead 1934, p.4). Mead suggested that the development of our self-concepts is vitally dependent upon social concepts.

In other words, if an individual belongs to a group low in status and power, it is more than likely that they will have feelings consistent with that in group.

Morris (2002) reported from research that low self-esteem can have a negative impact upon individuals learning and ability to succeed. Extensive studies have suggested that self-esteem is influenced by a number of factors comprising of gender, socio-economic status, appearance and peer acceptance (Coopersmith 1967, Rosenberg 1965). Katz (1999) further indicated that 27% of boy's self-esteem decreases significantly throughout adolescence. However, criticisms of the methods used to measure self-esteem have been put forward due to the difficulty in accurately assessing it. Salvin-Williams and Jaquish (1981) discovered that self-reports and ratings by others can be inaccurate and those specifically focusing on the same measure produce very different results, indicating great inconsistencies. Coopersmith (1967) however, refutes such claims and affirms a significant correlation between the two measures.

Research suggests that self-esteem can change throughout adolescence and there is debate over whether it is in fact global or situational. Rosenberg (1965) criticised this finding and advocated that self-esteem remains relatively stable. He defined self-esteem as a global positive or negative self-assessment, therefore regarding self-esteem as a personality trait.

According to Marsh et al (1983) and Hall and Taylor (1985), global measures of self-esteem may be biased towards stereotypical male characteristics. Males are assumed to be proud and positively promote their own self-image, in contrast to females, who are expected to be modest. Thus male's responses may be more optimistic, or consist of exaggerated self-perceptions.

Francis and James (1996) claimed that there are important discrepancies in the self-esteem levels of males and females. Specifically, that males reported considerably higher levels of self-esteem and females lower, advocating that self-esteem scales such as the Rosenberg Self-Esteem scale unintentionally discriminates against females, as not all measures of

self-regard uncover more positive scores among males, for example the Lipsitt Self-Concept Scale (1958). Francis and James (1996) also support previous studies suggesting that females have more of a negative self-image than males. Evidence suggests that gender differences in self-esteem increases with age. McLean (2003) reports that females experience lower self-esteem during secondary education with regards to perceptions of attractiveness and other people's perceptions of them, whereas males are more likely to demonstrate inflated levels of self-esteem through exaggerating their abilities.

Self-esteem at a relatively young age is based heavily upon concrete descriptive characteristics (Sitpek, Rechia and McLintic 1992). As children between the ages of 4 and 7 are unable to use social comparisons accurately and they receive constant positive feedback, they often overcompensate their sense of adequacy. As children enter adolescence however, self-esteem becomes highly significant as individuals are increasingly concerned with their self-image and become more vulnerable and concerned about peer acceptance and approval.

Self-esteem continues to develop throughout adolescence and although individuals strive to maintain their independence, parental support during this time is still increasingly important (Hart, Fegley and Brengelman 1993). Self-esteem generally remains relatively stable but it has been reported to fluctuate, particularly at critical periods in a person's life (McLean 2003). Branden (1983) reported a link between low self-esteem, anxiety and depression and suggested that this ultimately impacts upon an individual's social performance.

McLean (2003) described contingent self-esteem as differing from low self-esteem. He described how some individuals' self-esteem is entirely reliant upon the approval of others, constantly facing controlling standards or competitive situations. Schools may often reinforce contingent self-esteem due to the nature of activities and the pressure to deliver results and this could lead to increased social comparison. Some theorists advocate that low

self-esteem leads to underachievement and disaffection, although it seems the evidence suggesting this is relatively small (Baumeister, Smart and Boden 1996). High self-esteem on the other hand, is not always associated with positive outcomes and has been closely linked with aggressive behaviour and delinquency in some cases (Hughes, Cavell and Grossman 1997). Baumeister (1993) further suggested that high self-esteem sometimes creates in individuals the need to undertake excessive high risks and goals.

1.9 Self-Esteem and Motivated Learning

McLean (2003) advocated the importance of considering the role of self-esteem in motivated learning. He believed that by exploring self esteem in relation to the four mindsets of motivation: self-efficacy beliefs, attitudes to achievement, ideas about ability and explanations for progress, this will create a deeper knowledge and understanding about the relationship and impact it can have upon achievement.

McLean (2003) also suggested that the motivational profiles of males and females are quite different, particularly he describes how girls adjust better in school to conformity demands and how girl's goals rest heavily upon intimacy and affirmation whereas boys value their independence and power status. Females often define themselves in close relationships in comparison to males who prefer larger group affiliations and strive to enhance their power status (Cross and Madson 1997). Boys have a significantly higher desire for control than females and due to their different motives, males and females adopt a number of diverse strategies to enhance their self-worth (Burger 1990).

Boekaerts (1994) described 3 levels of motivation that determine a pupil's motivational state: Superordinate level, Middle level and Momentary level. See table 1b below:

Table 1b: A table showing the three different levels at which pupil motivation can be studied, as described by Boekaerts (1994)

Superordinate level	Refers to the student's general inclination towards learning
Middle level	Refers to the student's inclination and attitude towards different areas of learning
Momentary level	Refers to the student's commitment to specific tasks

'When students do not show an inclination towards learning at either the superordinate and middle levels and spasmodic or negligible inclination at the momentary level then they are variously described as disaffected, disillusioned, alienated, passive and reluctant learners' (McNamara 2009:7). McNamara describes how successful pupil management techniques have been developed and employed however, to effect change in pupil behaviour and highlights the importance of the interactional relationship between thinking, feeling and behaving. He goes on to criticise interventions that focus purely on behavioural elements as these approaches overlook the crucial importance of effecting change through thinking and feeling.

Some theorists suggest that group interventions may impact positively upon an individual's self-esteem as they promote confidence and a sense of belonging (Clemes and Bean 1990). Clemes and Bean further reported that low self-esteem can impact significantly upon pupil's academic learning and create feelings of disaffection within school. This can in turn create loss of interest in school and a lack of motivation. Bandura (1997) introduced the concept of self-efficacy as being feelings, thoughts and behaviours specific to a particular situation and the competencies an individual feels about how they will perform in such a situation and low self-efficacy is generally associated with low self-esteem.

Apter (1997) reported that the ages of between 5 and 15 are vital with regards to the development of self-esteem and self-efficacy as this is when children begin to assess their capabilities and develop feelings of success and failure. Apter believes that school is the key arena in which pupils experience challenges that create such feelings and therefore schools should seek to maximise and support pupils' development in this area. Apter's findings have helped to inform the target age group for the current research study, as the sample of participants will be aged 13-14; a critical time with regards to the development of self-esteem (Apter 1997).

Haney and Durlak (1998) explored the impact of targeted intervention programmes implemented in schools to promote the self-esteem of pupils. They reported that the interventions which focused specifically on raising self-esteem were much more effectual than those considered alongside other programmes. The current study is a targeted intervention that aims to promote both pupil self-esteem and resilience. It will be interesting to reflect upon the findings in relation to Harvey and Durlak's previous research and to evaluate the effectiveness of the intervention implemented.

As discussed throughout the previous sections, evidence appears to suggest that poor self-esteem can impact significantly upon pupil achievement with some studies reporting critical stages of development where children begin to assess their own capabilities. The school environment plays a vital role in this and targeted interventions aimed at promoting self-esteem and motivation have proved effective. The present study aims to gather more evidence in this field through adopting a targeted intervention based upon motivational principles to promote pupil self-esteem in the school setting.

Let us turn now to examine the crucial role that motivation plays in this relationship and the impact it can have on pupils learning and engagement in school.

1.10 Motivation

This section aims to draw upon a number of pertinent studies that demonstrate the crucial role of motivation in learning, as well as exploring the theoretical underpinnings of motivational dynamics. The author feels that the field of motivation is highly relevant to the present study and will continually reflect upon its importance in promoting pupil's mental health and well being, as well as providing a rationale for the current research that is to be undertaken.

Motivation has been defined as 'the processes involved in arousing, directing and sustaining behaviour' (Bull 1977, p.1). It is further described as 'a combination of the individual's:

- perceived effort-reward probability
- the effort, abilities and traits required
- perceived role expectations in the task
- the performance required
- the intrinsic and extrinsic rewards on offer
- the perceived equitable rewards and
- the degree of satisfaction'

(Vroom 1964, p.1)

A study by Stipek (1995) involving preschool children found that motivational styles are learnt from an early age and that children who were involved in child-centred programmes, compared with those placed in didactic ones, were less likely to have lower expectations of success on academic tasks, be continually dependent upon adults and worry more about school in comparison to the other group who displayed many of these traits. Castenell's (1983) findings on motivational levels of adolescents exploring race, sex and class highlighted that Y8 pupils' experience of success and failure is the result of the constructing of attributions over time.

Covington (2000) advocated the importance of motivational dynamics in determining school achievement. 'There are three things to remember about education. The first is motivation. The second one is motivation. The third one is motivation' (Maehr and Meyer 1997, p.372). Covington regarded an interaction between pupils' social and academic goals, the motivating properties behind these goals and the reward systems created in the classroom environment that jointly influence the value and amount of pupil learning and achievement. Covington further described two different theories of achievement motivation that have emerged: motives as drives and motives as goals. Motives as drives is based upon a physiological perspective and satisfying basic needs. However, due to much criticism this later came to consider psychological motives such as the need for social approval and achievement. It can be defined as 'an internal state, need or condition that impels individuals towards action.....needs were thought to rely largely within the individual..trait-like' (Covington 2000, p.173).

Atkinson (1957) and McClelland's (1961) learned drive research resulted in the notion that achievement rests upon the emotional conflict of reaching success and avoiding failure. In contrast, motives as goals theorists assume 'that all actions are given meaning, direction and purpose by the goals individuals seek out and that the quality and intensity of behaviour will change as these goals change' (Covington 2000, p.174). However, criticisms of this approach suggest that no real explanation is given as to why one goal may be chosen over another.

Achievement goal theory has developed upon the motives as goals perspective and 'the basic contention of achievement goal theory is that depending on their subjective purposes, achievement goals differentially influence school achievement via variations in the quality of cognitive self-regulation processes' (Covington 2000, p.174). Pupils who have cognitive self-regulation are actively involved in their own learning and they plan and monitor their progress to meet their desired goals. Two further goals described by theorists are learning goals, which involve developing competency and understanding of what is to be learnt, and performance

goals, that involve an individual outperforming others to raise status amongst peers. Goal theorists advocate that learning goals involves in depth strategic processing of information, ultimately leading to enhanced school achievement and describe how performance goals generate rote-level processing that leads to a superficial influence on achievement.

Social goals is another area that theorists have explored and consider as a highly important component of goal theory. Approval and social acceptance are regarded as a strong motivator in individuals (McClelland 1955). Schneider et al (1996) advocate that social goals are similar to academic goals due to the need for acceptance and the way they empower individuals to strive for achievement. Developing friendships and feeling a sense of belonging is considered important by most children, more so than the desire to achieve academic goals (Wentzel 1992). Academic and social goals are often considered as being closely linked as pro-social behaviour often leads to positive academic achievement (Wentzel 1993). However, the nature of this relationship appears to be thoroughly complex and theorists advocate for more research in this domain to be undertaken.

Two main theories of motivation have been discussed in the literature; behavioural theories and cognitive approaches. The behavioural approach rests upon the stimulus-response mechanism and describes how motivation rests upon instincts, emotions and basic drives. The cognitive approaches explore how incoming stimulation is applied and regard individual's beliefs, thoughts, feelings and values as the main influences on their own behaviour (McLean 2003). The definition and theories underlying motivation have undergone major changes over the past 20 years and there is now a real emphasis upon internal processors over environmental factors (Sandstone and Harackiewicz 2000).

Indoe (1999) makes explicit links between pupil's levels of motivation and their mental health: 'The child or adolescent who does not feel in control, who perceives the world as a place of unpredictability is someone who is likely to be at risk of depression, anxiety and displays of inappropriate anger.

Adolescence in particular is experienced as a time of transition and for taking on the values of identity, pro-social behaviour and social role. Motivation is a critical theme throughout this development transition' (Indoe 1999, p.1).

Juvonnen and Wentzel (1996) further reported in their findings that academic achievement rests heavily upon social goals and how socially responsive behaviour is promoted in the classroom environment. McLean (2003) regards intrinsic and extrinsic motivation as being equally important for a child and describes how they may have a combination of both. Some children may have little intrinsic motivation and thus require a lot of extrinsic motivation from the people around them. However, this may then lead to an increase in the child's levels of intrinsic motivation and less of the extrinsic motivation being required. Mclean (2003) advocates the importance of promoting intrinsic motivation to make tasks more pleasurable and to support learning and achievement.

Deci and Ryan (2000) further developed this idea of motivation with the self-determination theory. 'Self-determination is any effort to be in control of and to alter our actions, thoughts and feelings. Its essential nature is of one action overriding another, in terms of stopping, starting or changing behaviour. Self-determination is the degree to which we feel our actions are autonomous' (Deci and Ryan 1985, p. 9). Self-determination involves having a specified goal in mind and monitoring and changing your responses to suit the goal. If the student does not know the goal however and is unable to self-monitor, that is when self-determination failure occurs.

Deci and Ryan advocate that teachers must support the development of a pupil's self determination by offering them opportunities to problem solve, make decisions and develop their autonomy without trying to over impose their desires. The targeted intervention that is to be employed in the present study is highly relevant to Deci and Ryan's self-determination research, as based alongside these principles it aims to promote pupils' levels of motivation through increasing knowledge and concern, self-efficacy, internal attribution and self-esteem.

Elliot and Church (1977) challenged the assumption that disengaged pupils are unmotivated. They advocated that many of these pupils may be highly motivated to avoid failure, rather than succeed. Emotional anticipation is regarded as key factor in achievement and Elliot and Church (1977) suggested that fear can further act as an inhibitor of an individual's motivation.

Reflecting upon the literature reviewed in this section, it seems that both internal and external regulatory systems determine pupil behaviour. The author considers that such environmental factors and pupil aspirations can therefore strongly influence their levels of motivation (McNamara 2009). Based upon this evidence, the current intervention would hope to encourage pupils' aspirations and feelings of competency through applying a MI based approach in a structured way, whilst positively influencing pupils' levels of resiliency and self-esteem.

1.11 Motivational Interviewing (MI): An Intervention

The following section aims to review the theoretical underpinnings and useful applications of the intervention that is to be applied in the current study. Research that has previously been employed in the field of health and addictive behaviours and more recent studies in education using a MI approach will be discussed and critiqued. Useful links between MI, solution focused thinking and cognitive behavioural therapy will further be explored.

Motivational interviewing (MI) is generally defined as 'a client-centred, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence' (Miller and Rollnick 1991, p.25). It originated as a health based counselling intervention used with individuals who had addictive behaviours, but it is now widely used and accepted across various other fields and has more recently been developed in the field of education by McNamara (2009). He advocated: 'In the current educational climate everyone is encouraged to promote active pupil learning, empower pupils, engage in cooperative learning and develop non coercive pupil management

skills. These aims depend to a large extent on a commitment from pupils to share the aspirations and goals of their teachers....pupils have to feel motivated' (McNamara 1998, p.1).

Miller and Rollnick (2002) are two of the key players in the field of MI and advocate that unlike other interventions, MI does not assume that people are ready to change any aspects of their behaviour. MI aims to increase knowledge and concern, promote self-efficacy, internal attribution and self-esteem (McNamara 2009). MI evolved from clinical practice and thus lacks a formal theoretical grounding. However, close links have been made with the Transtheoretical Model of Human Behaviour Change (Prochaska and Diclemente 1982) and the Self-Determination Theory (Deci and Ryan 1985). MI is based upon 6 stages of change as described in the Transtheoretical Model of Prochaska and Diclemente (1982). These stages of change are:

- **Pre-contemplative**, where the client does not consider that they need to change
- **Contemplation**, weighing up the pros and cons of change
- **Preparation**, preparing for change
- **Action**, putting the decision into practice
- **Maintenance**, maintaining change
- **Relapse**, returning to previous behaviour

Field (2004) advocates that both parties must understand the stages of change, 'educators need to understand the change process to normalize where learners are in the process of change and to utilize appropriate strategies and to assist learners in moving through the different stages. Learners need to understand the change process to normalize what they may experience related to keeping the status quo, e.g. not going back to school' (Fields 2004, p.6).

MI techniques 'can be considered an amalgam of humanistic, rogerian and behavioural counselling' (McNamara 1998, p.1). The humanistic elements of psychology are evident from the need for therapists to show empathy, genuineness and unconditional positive regard for the client that they are working with. Rogerian elements are illustrated through the non-directive counselling approach and behavioural elements occur when the non-directive approach becomes a more guided approach. McNamara (2009) more recently described four advanced MI techniques as comprising of:

- **Positive restructuring**—feeding back through a positive interpretation
- **Special reflections**- repeating, rewording and paraphrasing
- **Provoking**- the counsellor reflects that there is no issue to encourage the client to explore this further
- **Columbo technique**- where the counsellor feigns incompetence to reduce any feelings of threat, but actually creates a helping response

Davies (2007) further advocates that the key principles of MI apply at all stages of change and these include: **expressing empathy, developing discrepancy, avoiding arguments, rolling with resistance and supporting self-efficacy** (Davies 2007). Criticisms have been made however, regarding the stages of change and there is a lack of empirical evidence into the use of MI as an intervention in educational settings. West (2005) suggests that 'categorising individuals according to their change intentions can be unhelpful and can lead to inappropriate intervention strategies being proposed' (West 2005, p.36).

In the field of health and addictive behaviours, MI has been reported to yield positive outcomes for many individuals, particularly through enhancing client motivation and commitment for change (Rollnick et al 1992). A study exploring the effectiveness of MI in reducing drinking, cigarette and cannabis smoking amongst young people suggested some benefits (Gray, McCambridge and Strang 2005).

McNamara (2009) further adapted the use of MI strategies in the field of education. Atkinson and Woods (2003) explored the effectiveness of MI strategies applied in school settings specifically, exploring the effect it had on disaffected secondary school students. They reported that when applied to individual casework, this demonstrated positive results. Atkinson described how she had applied MI in a case study with a pupil who had been permanently excluded from school and advocated how MI and the stages of change can be used flexibly with individuals who have varying needs. Atkinson regards collaboration, evocation and autonomy as key in encapsulating the spirit of MI and from her research she suggested a number of strategies that professionals could apply when working with children and young people on a MI based intervention. See Table 1c below.

Table 1c: Strategies that may be applied during the stages of change as described by Atkinson (2003)

<p>Pre-contemplation</p>	<ul style="list-style-type: none"> • Increase knowledge • Support others • Gather information about barriers • Open up options
<p>Contemplation</p>	<ul style="list-style-type: none"> • Raise awareness • Reframe problem • Offer support • Maintain contact • Map choices • Develop understanding
<p>Preparation</p>	<ul style="list-style-type: none"> • Prepare • Agree a plan • Identify who needs support • Share commitment with others
<p>Active Change</p>	<ul style="list-style-type: none"> • Pupil self management • Pupil owns plan • Parent/carer involvement • Self-monitoring and review • Environmental controls

	<ul style="list-style-type: none"> • Reward countering • Helping relationships
Maintenance	<ul style="list-style-type: none"> • Continued pupil self-management • Reward countering • Helping relationships • Preparation for/rehearsal of difficult situations • Ongoing opportunities • Share positives
Relapse	<ul style="list-style-type: none"> • Emphasise positives • Revisit commitment to change • Acknowledge circumstances • Explore additional factors • Appreciate change takes time • Don't panic!

(Atkinson 2003, p. 62)

Although Atkinson's detailed research has raised great awareness and contributed further knowledge and confidence for professionals in using aspects of MI with children and young people in educational settings, the author feels that it is important to critique the structure of the design. As only case studies were used to gather the research data, one therefore has to question the veracity and robustness of the information gathered, particularly the fact that only a very small number of participants were involved (3 case

studies) which arose out of school referrals to the Educational Psychology Service. It is therefore extremely difficult to generalise the findings.

However, such positive conclusions highlighted as a result of these case studies could in fact pave the way for more rigorous experimental studies to be undertaken in the future (Kittles and Atkinson 2009). Case study research highlights how the use of MI in educational settings can lead to positive outcomes including improved attendance, confidence and academic self-concept (Atkinson and Woods 2003). The present study thus aims to gather more information to this evidence base by employing a randomised control trial with a larger sample size, whilst drawing upon Atkinson's principles in the area of MI.

More recently, Wood and Rice (2009) considered using a MI approach with parents, particularly examining how parenting styles may influence a child's behaviour. They described a number of successful case studies utilising a MI approach. They advocated how 'Motivational Interviewing is an approach which has much to offer professionals as they seek to facilitate parent's reflections on their crucial role and the relationship between their own and their child's behaviour. Motivational Interviewing can also engage the parent's motivation to utilise their understanding of the links between their own behaviour and that of their child to make positive changes in their own behaviour with a view to supporting the child' (Wood and Rice 2009, p.90).

Wood and Rice further combined elements of solution focused approaches with MI and highlighted successful outcomes as a result. Qualitative feedback following the various MI interventions revealed that there had been maintained changes for many parents. However, although Wood and Rice positively described several different case studies, the number of sessions for each intervention varied across studies (4, 7 and 10) and there was a lack of equivalence between the participants.

Miller, Benefield and Tonigan's (1993) study involved randomly assigning problem drinkers to a MI intervention in comparison to a direct/confront style intervention. Their results suggested 11% more change talk in the

participants of the MI intervention. Amrhein, Miller, Yahne, Palmer and Fulcher (2000) further supported these findings in their study illustrating from a psycholinguistic analysis of MI that change talk does in fact increase as a result of a MI intervention. Miller, Benefield and Tonigan reported that those participants randomly assigned to confront/direct methods showed 78% more resistance than the MI group.

Rubak (2005) undertook a systematic review and meta-analysis of MI interventions applied in different areas of disease using randomised control trials (RCT's). After searching 16 databases, Rubak (2005) reported 72 relevant RCT's. MI has been used in relation to alcohol abuse, drug addictions, smoking cessation, weight loss, diabetes, asthma and increasing physical activity. It has been used amongst various health care professionals including psychologists, doctors, midwives and nurses. Significant results were evident in the use of MI, even in brief encounters of 15 minutes (64%). The results of the studies suggested the success of a MI intervention when used in clinical settings in a broad range of behavioural problems and diseases (74%, 53/72 RCT's).

Rubak reported in his findings that MI in a scientific setting outperforms traditional advice given in the treatment of a variety of diseases. None of the studies reviewed reported any adverse effects of an MI intervention. Furthermore, although a methodological quality rating reported that, except for one study, all other RCT's were of high quality, the meta analysis illustrating positive effects was only performed on 19 out of 42 studies that stated objective measures. Further larger studies were reported to be needed to provide more information on MI, the methods used and how it could be applied in daily practice.

Cognitive behavioural therapy (CBT) has been reported by many as a highly effective treatment for children and adolescents with anxiety and depression related difficulties as well as prevention in high-risk groups (Clark 1999). CBT originated in the work of Beck (1976) and explores the interaction of key factors that influence a person's behaviour. These factors are thoughts,

emotions, behaviour and the environment. Beck strongly believed that if you can change one of these factors it will also affect the others. The process requires increased empathy and rapport building to develop a positive relationship between the client and therapist. However, some critics advocate that it is the stigmatization of these prevention programmes that lead to a lack of participants and high drop-out rates and suggest that the programmes need to be available to all client groups, rather than just those with 'risk' status (Shochet et al 2001).

CBT has been closely associated with MI as an intervention that aims to change individual behaviour. Westra and Dozois (2006) undertook a study that explored the effectiveness of MI as a pre-treatment to prepare participants for CBT in reducing anxiety. 55 participants with an anxiety diagnosis were randomly assigned to receive either 3 sessions of MI or no pre-treatment. The participants who received the MI pre-treatment demonstrated a significantly higher expectancy for anxiety control and greater homework compliance in CBT and these gains were further apparent in a 6 month follow up. Westra and Dozois (2006) believe that this evidence demonstrates how brief pre-treatments such as MI can enhance engagement and outcomes in CBT.

MI has also been considered by other theorists as a pre-treatment intervention due to its core aims of increasing motivation and resolving ambivalence about change (Arkowitz and Westra 2004). MI approaches differ from CBT however, with regards to whom effects change. In CBT, the therapist advocates change, whereas in MI, the therapist's role is to help the client to explore and facilitate change themselves through enhancing motivation (Westra and Dozois 2006).

Burke et al (2003) further reported that MI produced more significant results as a pre-treatment, than a standalone one. However, as there have only been a few studies evaluating the impact of MI as both a pre-treatment and a stand alone treatment beyond health and clinically based issues more

studies in other domains are required. Particularly in education evidence is significantly lacking.

MI and solution focused brief therapy (SFBT) have further been described as interventions that explore change and appear to share similar approaches and ideas. Amesu (2004) described how applying solution focused language could support children and young people engaged in a MI intervention and help facilitate movement through the stages of change. With regards to the present study, aspects of solution focused thinking will be applied within the MI intervention to support this aforementioned transition. Other theorists such as Lewis and Osborn (2004) have also described positive links between MI and Solution Focused approaches and have suggested that they are combined as an intervention and applied in school settings.

MI clearly advocates that some people are not prepared to think about change and may have strong reasons for this. Therefore it can either be imposed on them, which would be ethically wrong and quite problematic, or individuals need to be motivated to do something. MI therefore aims to motivate individuals to do something about their difficulties and the stages of change are paramount to this. If an individual is a pre-contemplator the MI principles suggest spending more time exploring the issues, gathering more information about the individual and accepting the child or young person's perspectives. MI theorists would also suggest building up relationships and drawing upon solution focused strategies. McNamara (2009) describes the advantages of using MI in educational settings as encouraging both pupil and teacher to play an active role in a co-operative working relationship, with the pupil ultimately having responsibility (with support). McNamara also regards the intervention as focusing on internal not external attribution, as the cause of the problems.

Atkinson and Woods (2003) have raised concerns over the lack of guidance and information on how to undertake a MI intervention with young people. Evidence is particularly needed on how and why this intervention works. Many of the limited studies undertaken in the field of education with MI fall

under the AB experimental design and they are generally case studies, thus more rigorous experimental studies are subsequently needed.

As discussed above, MI addresses issues involving a lack of motivation to change in a positive way. Many of the studies mentioned throughout this section focus heavily upon the field of MI when applied in health and addictive behaviours, with more recent small scale studies exploring the impact and successes of MI in educational settings. Limited research that exists does advocate the success of implementing a MI approach with children and young people (McNamara 2009) but as this evidence is generally based upon limited case studies, more robust experimental designs are subsequently needed. The present study is the first MI randomised control trial applied in an educational setting and aims to contribute a more meticulous evidence base to the field of research.

1.12 Group Theory and Group-Based Motivational Interviewing (GMI)

The present study aims to evaluate the impact of a group based motivational interviewing (GMI) approach and the author intends to review and critique the limited evidence that currently exists throughout this chapter, as well as justify the reasons for undertaking research in this domain. Group theory and group dynamics will also be examined in some detail as the author believes that this is a pertinent area that is highly relevant to the current research.

MI is generally delivered as an individual, one to one approach. However, research has suggested that a group-based intervention may yield some positive results (Miller and Rollnick 2002 and Fields 2004), although data in this area is considerably weak.

Fields devised a five week group-based MI intervention for adults and has subsequently published the materials. 'In its pure form, group based MI is more a process of following the concerns of the group and reflecting points of

individual and group discrepancy to enhance motivation' (Miller and Rollnick 2002, p.384).

Miller and Rollnick (2002) discuss the perils and possibilities of group-based MI (GMI) in their research. They argue that GMI is less expensive, serves more clients and offers more social support than individual MI techniques. However, the evidence gathered from a study on the effects of GMI on adult outpatients and college student drinkers demonstrates mixed results. GMI used as an intervention with college student drinkers provided limited success. When used with adult outpatients however, GMI revealed more positive results suggesting some changes were made in client motivation (Foote et al 1999).

Miller and Rollnick (2002) suggest that 'the presence of the group in other contexts provides a powerful support system which assures the individual that he or she is not isolated in the desire for action.....because of group diffusion there is added reason to think that individual resistance might be minimized' (Miller and Rollnick 2002, p.382). However, Miller and Rollnick also highlight several considerations of adopting a GMI approach. Particularly suggesting that expressing empathy may be more problematic in a group format with individuals voicing opinions more strongly, which may lead to arguments and confrontation.

Group size is also argued to contribute significantly to the effectiveness of group problem solving. (Stephan and Mishler 1952). Stephan and Mishler would argue that a large group of people means only several members would actually engage in problem solving and stressed the importance of carefully considering size when organising group interventions.

Miller (2000) further critiques elements of a GMI approach, reporting that more individuals means less change talk for each person, suggesting that this is less likely to promote behaviour change. Miller and Rollnick suggest that some people in the group may also feel uncomfortable. This is where the author believes, as EPs, it is important to use our knowledge of

psychological theory in the area of group dynamics, group processes and interpersonal skills to ensure the group processes are effective.

Johnson and Johnson (2003) regard knowledge of group theory and group dynamics vital for successful outcomes and effective working in group situations. 'A knowledge of group dynamics is central to the long term maintenance of psychological health.....understanding group dynamics is central to education'. (Johnson and Johnson 2003, p.12). Defining a group has been deemed problematic over the years and there are numerous definitions of what a group actually is and if they actually exist. Commonly, 'A small group is 2 or more individuals in face to face interaction, each aware of positive interdependence as they strive to achieve mutual goals, each aware of his or her membership in the group and each aware of others who belong to the group'. (Johnson and Johnson 2003, p.15).

Johnson and Johnson's research led to them describing 4 types of groups. A pseudogroup can be described as a group with no trust or commitment in which its members are rivals and do not wish to be part of the group. A traditional work group comprises of individuals who have been selected to work together, but members feel following an initial discussion that they are in fact, working individually with little collaboration or help. An effective group consists of members who share a common aim. Two way communication, distributed leadership, a clear decision making procedure and the resolving of conflicts in a constructive way are plainly evident. Finally, Johnson and Johnson describe a high performance group as being stronger than an effective group because group members are much more committed. However, they also reported that a high performance group is very rare.

Lewin (1948), a highly influential social psychologist who focused on more humanistic perspectives in psychology, believed conflict and tension does not only create negative outcomes in group work, but also positive outcomes leading to success. He advocated that it was how individuals deal with this tension and conflict that created the type of outcome. Destructive conflicts can create hostility, anger and pain causing a breakdown in group

functioning due to lack of commitment and engagement with other members. Whereas, constructive conflicts ultimately lead to a higher degree of trust and respect for group members as they resolve tensions amicably, making goals clear (Johnson and Johnson 2003). Constructive conflicts can in fact, move things forward and exhibit more about an individual's character, developing partnerships and enhancing trust. If a conflict is discussed as a shared problem within the group using common language and agreed vocabulary, tensions are more likely to be resolved successfully. (Johnson and Johnson 2003).

Engestrom (2005) further described how an individual's identity is challenged when they engage in group work with others and issues of power, leadership and assumptions about roles can affect success. Engestrom (2005) stated that 'I' becomes 'we' when members work jointly, as partnerships develop cohesively, forming group identities. New or multiple identities may be formed and there may be a reluctance to change ones identity to fit in with the group.

Ingersoll, Wagner and Gharib (2000) implemented a 10 week GMI intervention based upon the principles and activities applied with individuals on a MI approach. This led to a number of key considerations being addressed when bearing in mind a GMI approach:

- Will the group be a standalone treatment or adjunct to other treatment?
- Is the group going to be psycho-educational or process in nature?
- Will the group be given a fixed time period or will it be ongoing?
- Will new members be allowed to join the group at any time?
- Will feedback be provided?
- How will the group be mixed with regards to stages and readiness for change?

- Will it be a motivational group or will it be motivational interviewing?

(adapted from Miller and Rollnick 2002, p. 382-383).

Further research and experimental studies evaluating the effects of a GMI approach is clearly required. Difficulties were apparent in a GMI study of college student drinkers due to the fact that the participants were all at different stages of change and those who were pre-contemplators needed more time exploring this before moving on. As discussed throughout, challenges of group size and duration, along with a number of other factors, must be fully considered when undertaking a GMI approach (Miller and Rollnick 2002). The researcher has taken into consideration the pragmatics of group size as a result of previous findings and research discussed above. This has helped to conclude that 6 will be the maximum group number for the current MI intervention study.

Group theory advocates the importance of having a clear understanding of group dynamics when working with a group of individuals in an effective manner. Research in this area, as discussed throughout this section, has raised questions into the possibilities and potential limitations of applying a GMI approach. Evidence is considerably weak and more data is clearly requisite. Hence, the present study aims to draw upon the literature and limited data that currently exists and employ a GMI experimental study in a school-based setting.

1.13 Motivational Interviewing, Resilience and Self-Esteem

The literature has highlighted the importance and benefits of promoting pupil self-esteem and resilience. A common, widely acknowledged belief is that pupils will learn and engage more in school if their emotional health and well being is promoted in a proactive and positive way (Luthar 2003). MI is a client centred, goal oriented approach based upon humanistic, rogerian and behavioural elements of psychology. It has been reported to yield positive outcomes for many individuals, particularly through enhancing client

motivation and commitment for change (Miller and Rollnick 2002 and Mcnamara 2009). Currently, there is limited research and data available within the field of education evaluating the effects of a MI intervention and no published research on the effects of a group-based approach used in schools. The author is therefore keen to explore if a group-based motivational interviewing intervention can promote pupil resilience and self-esteem.

As Ginsburg and Drake (2002) reported, school based interventions are key arenas for developing pupils emotional health and well being and offer access to a number of services that some pupils might not otherwise receive. They further suggest that pupil anxiety is often associated with school based experiences and imply that by offering interventions within the school setting, pupils are able to practice new coping skills with ongoing support from peers that is not always as accessible in clinical settings. Group based interventions encourage peer support and reflection in a safe environment and some theorists suggest that such interventions can impact positively upon an individual's self-esteem by further promoting confidence and a sense of belonging (Clemes and Bean 1990). Children with low levels of resilience and self-esteem may feel that their perceptions and desires are not taken into consideration by others and motivational interviewing aims to enhance these feelings through promoting positive change. (Miller and Rollnick 2002).

1.14 Reasons for Undertaking Research in this Area

The author has chosen to evaluate the impact of a MI intervention on pupil resilience and self-esteem, partly because of a keen interest in the concept of MI. Furthermore, the area of social inclusion and mental well being is currently a key government agenda, with the CAMHS (2008) review further highlighting the role Educational Psychologists can play as tier two professionals. They describe how offering support and consultation as well as undertaking assessment and intervention activities can positively promote

the mental health and emotional well being of children and young people. Discussions with key stakeholders also led to the formulation of a number of research questions that the author intends to address.

Motivational Interviewing is an interesting approach that attempts to engage individuals through using a non-directive, goal-oriented, humanistic approach and one that may well be appropriate in promoting social inclusion. Literature in the field, particularly health, suggests it has a significant impact on changing individuals' thoughts and behaviour. Its successes in education have also more recently been reported (Atkinson 2005, McNamara 2009) and the author is keen to gather further data to support this by implementing the first randomised control trial evaluating the impact of a GMI intervention in an applied setting.

Gaps in the literature further support the researcher's decision to adopt a post-positivist approach in the current experimental design, as the investigation is striving for objectivity, whilst exploring cause and effect relationships between variables. MI is an area with a small evidence base and there is a need for controlled studies to provide more data. Randomised Control Trials are often described as the 'gold standard' of research as they provide evidence for effectiveness (Robson 2002). The researcher further regards a post-positivist perspective as appropriate in considering how the researcher's values, knowledge and hypotheses may impact upon the design.

The author has researched the field of MI widely and although it has demonstrated success across other domains, there is a need for more data and evidence to be collected on its impact in the area of education. 'There is significant room and need for studies integrating MI with group processes' (Miller and Rollnick 2002, p. 388). Thus, the current research could offer an original contribution, whilst also addressing important issues in the field of social, emotional and mental well being that can often lead to social exclusion. There is limited research on the use of MI in promoting resiliency

and self-esteem and as the literature suggests, pupil resilience may be promoted through adopting positive motivational styles (Newman 2004).

Motivational interviewing aims to promote self-esteem, self-efficacy internal attribution and increase knowledge and concern. The author feels that it is set apart from many other interventions because it does not simply assume that everyone is ready to accept change and explores individuals' feelings in great depth. The author considers that through adopting a humanistic, client centred approach, MI may well contribute in developing the resilience and self-esteem of individuals and this is something the study strives to explore.

The author has decided to use a group-based approach to MI because if successful and further applied in schools, it would mean more pupils would be given the opportunity to access the intervention in a group situation and also because limited research to date has in fact demonstrated that a supportive group based MI intervention may deliver more effective results (Fields 2004).

The author believes that the chosen research area is highly relevant to the profession of educational psychology, with the underpinnings of the intervention based upon humanistic, rogerian and behavioural elements of psychology (Miller and Rollnick 2002). The field of mental health and emotional well being is also currently a very topical issue, along with the government drive for social inclusion. If further evidence collected in this study and others can support the significance of a group based MI intervention in promoting pupil self-esteem and resilience, this could potentially inform future practice, as well as subsequently lead to more detailed research projects being applied across educational settings.

The research questions that the author intends to investigate in the current study are outlined below.

1.15 Research Questions

How effective is a group-based motivational interviewing intervention in promoting pupil resilience and self-esteem?

Key questions the researcher aims to address include:

- Can a group-based motivational interviewing intervention promote pupils' resilience?
- Can a group-based motivational interviewing intervention promote pupils' self-esteem?
- Are teacher's views of their pupil's mental well being enhanced following pupil involvement in a five week motivational interviewing intervention?
- Are pupil's views of their mental well being enhanced following their involvement in a five week motivational interviewing intervention?

Let us turn now to Chapter Two, the Methodology, to explore the rationale and methods to be applied in the researcher's experimental design.

Chapter 2 - Methodology

2.1 Introduction

This chapter aims to explore and consider the methods and final design chosen for the current study. This will be discussed, with regards to the purpose and rationale of the experimental design, drawing upon various epistemological perspectives and principles, the researcher's hypotheses and the procedures and practices that are pertinent to the present study.

2.2 Epistemological Perspectives

'Epistemology is concerned with how we know things and what we can regard as acceptable knowledge in a discipline' (Walliman 2006, p.15).

The researcher intends to discuss several paradigms that are considered as important underpinnings in the field of social research and will begin with an exploration of two of the most significant perspectives: Positivism and Interpretivism.

2.3 The Positivist/Interpretivist Divide

Two extreme approaches discussed in the literature that questions the position of the researcher are coined 'Positivism' and 'Interpretivism'.

Positivism is often defined as the 'standard view of science and is based on realism, an attempt to find out about one real world' (Walliman 2006, p.19). In contrast, Interpretivism relies upon idealism and humanism and maintains 'that the view of the world that we see around us is the creation of the mind' (Walliman 2006, p.20). The interpretivist approach resonates closely with the Constructivist paradigm and Interpretism is often referred to as Constructivism and/or Naturalistic (Schwandt 1994 and Guba and Lincoln 1994).

For a more in depth comparison of the Positivist and Interpretivist approaches see table 2a below:

Table 2a: A table to show the dimensions of comparisons between the Positivist and Interpretivist domains

Dimensions of comparisons	Positivist	Interpretivist
Philosophical basis	Realism	Idealism
The role of social science	Universal laws of society	People interpret the world differently
Basic units of social reality	Collectivity	Individuals
Theory	Scientists explain human behaviour	Sets of meaning people adopt to make sense of the world
Research	Experimental or quasi-experimental	Search for meaningful relationships
Methodology	Quantitative analysis	Qualitative analysis
Society	Ordered	Conflicted
Organisations	Goal-oriented	Dependent upon individual's goals
Organisational pathologies	Out of kilter	Conflict
Prescriptions for change	Change the structural organisation	Change the people or their values

(Adapted from Cohen and Manion 1994, p.10)

2.4 Post-Positivism

More recently, Robson (2002) described post-positivism as recognising ‘the force of the criticisms made of positivism and attempting to come to terms with them’ (Robson 2002, p.27). Post Positivists still acknowledge the idea of objectivity, but suggest that the researcher may well influence aspects of their experiment and advocate the importance of considering and reducing these factors and limitations. ‘Experimenter effects’ are considered by qualitative theorists as a fundamental part of the research process and they advocate that this term is simply a deluded form of subjectivity (Holloway 1989).

2.5 Fixed and Flexible Designs

When embarking upon research, practitioners need to decide upon an appropriate design strategy. Two of the most common designs are fixed and flexible.

Fixed designs involve the researcher clearly specifying and defining the design *before* undertaking the research. The data gathered for a fixed design often involves using quantitative measures to determine outcomes. In contrast, flexible designs develop during the data collection process and draw upon more qualitative methods and processes. However, although there are clear differences between the two design strategies, ‘while a design cannot be fixed and flexible at the same time, it could have a flexible phase followed by a fixed phase, or there could be a separate flexible element within an otherwise fixed design’ (Robson 2002, p.87).

The researcher strongly believes that the selection of the design depends upon the nature of the question. The current study is based upon a fixed design strategy, as the researcher intends to implement an experimental approach, by measuring the impact of controlling variables and hypothesising change as a result. This is applied research that is practitioner driven and as discussed previously in the literature review, evidence has highlighted the need for more detailed experimental approaches in the field

of MI, beyond case studies. Hence, the current study is a randomised control trial (RCT) exploring the effects of an MI intervention upon pupil self-esteem and resilience. A pilot study was also employed prior to undertaking the current research to ensure the design idea was feasible.

Robson (2002) describes experimental fixed designs as comprising of:

- Allocation of participants to different conditions
- Manipulation of the independent variable
- Exploring the impact of the manipulation on the dependent variable
- Controlling other variables

(Robson 2002)

2.6 Randomised Control Trials (RCTs)

Randomised Control Trials (RCTs) are often referred to as the 'Gold Standard' in research and are coined 'true' experiments by some researchers as they provide evidence for effectiveness (Robson 2002). RCTs are only described as being 'true' experiments if participants are allocated to each condition *randomly*.

The pre test, post test RCT design involves setting up an experimental and a control group, giving pre tests to both groups before the intervention, implementing an intervention only with the experimental group and then undertaking post tests with both groups to measure the impact of the intervention. The current design therefore is a pre test, post test RCT.

RCTs are not without their critics, however, and some theorists have challenged the feasibility, design and ethical issues surrounding the implementation of RCTs (Oakley 2000, Pawson and Tilley 1997).

Fixed designs, although described as being more likely to ensure validity and generalisability, have to consider the potential challenges including threats to

validity, issues surrounding random allocation of participants and ethical concerns. These factors will now be discussed further throughout the remainder of this chapter in relation to the current study.

2.7 Internal Validity

Internal validity refers to ‘the extent to which an investigation rules out or makes implausible alternative explanations of the results. Factors or influences other than the independent variable that could explain the results are called threats to internal validity’ (Kazdin 2003, p.24). Cook and Campbell (1979), Cohen and Manion (1994) and Robson (2002) described a number of factors that can create a threat to internal validity and these are summarised below.

Threats to Internal Validity

- History
- Maturation
- Statistical regression
- Instrumentation
- Mortality
- Selection
- Ambiguity about causal direction
- Diffusion of treatments
- Compensatory equalisation of treatments
- Compensatory rivalry

The researcher regards all of the above factors as pertinent threats to the internal validity of experimental designs. With regard to the current study, history, maturation, diffusion of treatment and testing are particularly important factors that could potentially compromise the results of the present design and thus must be acknowledged further.

History and Maturation

History refers to events that happen during the intervention e.g. personal experiences and significant events portrayed by the media that could potentially influence or affect the outcome of the study. As the current study aims to run over approximately 5/6 weeks, the researcher feels that although this is not a very long time period, issues around history must be recognised as being a potential threat to internal validity. Similarly, *maturation* describes how subjects change over time, as they become older, stronger, more tired or bored. 'In an experiment, the investigator must rule out that these changes associated with passage of time, whatever their basis (history, maturation) can be distinguished from the changes associated with an intervention' (Kazdin 2003, p.26).

Diffusion of Treatment

Diffusion of treatment refers to the possibility that an intervention given to one group may accidentally or inadvertently be given to another group, e.g. the control group, even though this was not the researcher's intended purpose. A potential difficulty with regards to the current study is that all participants involved in the study (both the experimental condition and wait list control condition) are located in the same setting during the intervention and this could potentially create a threat to the internal validity of the study.

Testing

Testing refers to the possible difficulties that may arise from administering the same measures more than once, as in the current study the instruments will be completed twice, both pre and post intervention and one must therefore be acutely aware of the issues that could arise around practice effects. *Response shift* further refers to a change in an individual's internal standards of measurement as they may complete the same measure at different times, but respond differently due to a change in perspective or circumstance.

Fidelity of Implementation

Treatment integrity refers to 'the fidelity with which a particular treatment is rendered in an investigation' (Kazdin 2003, p. 583). It is important that this information is provided so as to clarify the relationship between the independent and dependent variable and report if the study has been implemented as intended.

With regards to the current study, participants were allocated to one of two conditions: an experimental condition or a wait list control condition. The researcher delivered the intervention to the experimental condition drawing upon a well-structured manual, which was adhered to throughout, to ensure the intervention was delivered as it was intended to be. The pre and post measures were also administered with the support of a clearly structured script to ensure that both conditions were given exactly the same instructions.

Kazdin further reported that 'criteria, procedures, tasks and therapist and patient characteristics that define the treatment ought to be specified as well as possible' (Kazdin 2003, p.218). Unfortunately, as the researcher actually delivered the intervention in the present study, no observational methods were available to check the fidelity of treatment. As the Educational Psychology Service in which the researcher works is relatively small, the

other Educational Psychologists who are familiar with the principles and practices of the motivational Interviewing programme, were unavailable to observe any of the sessions due to work commitments. A fidelity score could therefore not be calculated.

Gersten et al (2005) described treatment fidelity as important, particularly so as to ensure that different implementers are delivering the intervention with the same amount of integrity. In the current study, the researcher delivered *all* of the sessions of the intervention, on four separate occasions. Therefore, although there are no issues around the effects of having several implementers who may potentially influence the outcomes of the research, it is important to consider any potential bias that may arise as a result of only *one* implementer being involved in delivering the research. This issue of experimenter expectancy effects will now be discussed further.

Experimenter Expectancy Effects

As the researcher delivered all of the sessions of the intervention independently, one must therefore acknowledge the issue of *experimenter effects* as a potential source of bias. Kazdin (2003) argues that the experimenter's views and desires regarding the anticipated outcomes of experimental research may in some way unintentionally influence the participants taking part in the study. However, research suggests that 'the pervasiveness of this influence among different areas of research is not known (and) how experimenter expectancies exert their influence is unclear' (Kazdin 2003, p.88). Experimental design literature further highlights how random assignment, as adopted in the current design, can distribute potential sources of bias equally (Kazdin 2003 and Robson 2002).

2.8 Reliability

Reliability refers to the extent to which the research can be replicated. Bryman (2004) regards the following three issues as key in ensuring a study's reliability:

- Stability
- Internal reliability
- Inter-observer reliability

The researcher feels that through adopting a clear fixed design strategy, the reliability of the study is enhanced. As Bryman (2004) describes, the pre and post test design strategy, as adopted in the current study, enhances stability for a set period of time. In this case, the study will run for a 5 week period incorporating pre and post tests.

2.9 The Researcher's Position in Real World Enquiry

The researcher regards the current study as falling in the post-positivist domain. Although striving for objectivity through applying an experimental design strategy and specifically investigating cause and effect relationships between variables, the researcher believes that there are a number of external factors that could potentially influence the study and its outcome as discussed throughout this chapter. Therefore, a post-positivist perspective is appropriate in considering how the researcher's values, knowledge and hypotheses may impact upon the research design, thus acknowledging all potential limitations.

2.10 The Present Study

Research Questions

How effective is a group-based motivational interviewing intervention in promoting pupil resilience and self-esteem?

Key questions I aim to address in my research include:

- Can a group-based motivational interviewing intervention promote Y8 pupils' resilience?
- Can a group-based motivational interviewing intervention promote Y8 pupils' self-esteem?
- Are teachers' views of their pupils' mental well being enhanced following pupil involvement in a five week motivational interviewing intervention?
- Are Y8 pupil's views of their mental well being enhanced following their involvement in a five week motivational interviewing intervention?

2.11 Hypotheses

The researcher has formulated a number of hypotheses pertinent to the current study. This also involved generating the null hypotheses, which will be accepted should the experimental hypotheses be rejected. This is because any change occurring at the post-test stage may have been due to chance and not be down to the effects of the MI intervention.

Hypothesis 1

Participants in the Motivational Interviewing condition will show significant increases in their self-esteem, as measured by Butler's Self Image Profile, in comparison to the wait list control condition.

Null Hypothesis 1

There will be no significant difference in the self-esteem scores on Butler's Self Image Profile between participants in the Motivational Interviewing condition and the wait list control condition.

Hypothesis 2

Participants in the Motivational Interviewing condition will show significant increases in their resiliency scores, as measured by Prince-Embury's Resiliency Scales, in comparison to the wait list control condition.

Null Hypothesis 2

There will be no significant difference in the resiliency scores between participants in the Motivational Interviewing condition and the wait list control condition.

Hypothesis 3

Participants in the Motivational Interviewing condition will demonstrate significant increases in their mental well being, as measured by Goodman's teacher SDQ, in comparison to participants in the wait list control condition.

Null Hypothesis 3

There will be no significant difference in the mental well being scores on the teacher SDQ between participants in the Motivational Interviewing condition and the wait list control condition.

Hypothesis 4

Participants in the Motivational Interviewing condition will demonstrate significant increases in their mental well being, as measured by Goodman's pupil SDQ, in comparison to participants in the wait list control condition.

Null Hypothesis 4

There will be no significant difference in the mental well being scores on the pupil SDQ between participants in the Motivational Interviewing condition and the wait list control condition.

2.12 Design Strategy

The design was a pre-test post-test randomised controlled trial (RCT) as participants were randomly allocated to an experimental group (to be given the MI intervention) and a control group (to be given a delayed intervention). Pre-test to post-test changes were then compared.

2.13 Blind Allocation

To implement a true experimental design and allow the results of the study to be generalised, the researcher randomly allocated participants into one of two conditions. 'Random assignment is the great *ceteris paribus* that is, other things being equal-of causal inference' (Cook and Campbell 1979, p. 5).

Once the Self Image Profiles screener (Butler 2001) had identified participants in Y8 with the lowest self-image scores from the sample (below 50), those pupils' names were printed onto paper, folded and put into a box. A member of the school staff was then asked to pick out the pieces of paper and place them into each condition.

Participants were allocated to either the MI condition or the wait list control condition. The researcher delivered the MI intervention in a mainstream secondary school for five weeks with the support of the school's Pastoral

Support Leader. The MI intervention was undertaken on four occasions between July 2009 and January 2010 with six participants in each group (N=24). Two pupils left the school during the intervention so the post measures could not be taken for these pupils and the information was therefore not utilised during analysis. Each session was delivered in exactly the same way by the researcher. 24 pupils made up the wait list control condition and received no intervention during this time.

2.14 Pilot Study

A pilot study was undertaken in March 2009 at a local mainstream secondary school with Year 9 pupils. The purpose of the pilot study was as follows:

- To trial the materials and become more familiar with using the MI programme 'Facilitating Change' (Atkinson 2005)
- To explore whether the materials, intended for use with individuals, could be applied in a group situation
- To evaluate whether the package was suitable for the intended age range
- To ensure that adequate time for each session was allocated

Six participants in Year 9 were involved in the pilot study, which comprised of three out of the five MI sessions being employed. Due to time issues and activities that were happening in school at that period, the researcher was unable to carry out the full five week intervention as initially planned and did not have the support of the Pastoral Support Leader in every session due to other commitments.

Following the pilot study, school raised concerns over undertaking the intervention with Y9 pupils due to issues regarding challenging behaviour at that time. So as not to clash with other interventions that the school was

planning to implement, it was agreed that the researcher would undertake the intervention with Y8 pupils.

The researcher felt that the presence of the Pastoral Support Leader at the sessions was important, and as she was further planning to run the intervention for the wait list control condition after the experimental study had been employed, the researcher was aware that a discussion would need to take place around the importance of supporting the group and picking a time suitable to the pupils and herself for maximum effectiveness. It was also felt that running the pilot session last lesson on Friday afternoon was not ideal, as several of the pupils appeared tired and were easily distracted. This was something that was considered when arranging dates to implement the intervention.

Reflecting upon the pilot study, the researcher also felt that when using the 'Facilitating Change' programme (Atkinson 2005) in a group situation, there were more opportunities for further discussion and exploration. Some of the activities originally designed for individuals were therefore not used as intended and several of the activities were replaced with pair work/whole group discussions. See appendix 1 for a brief overview of the amended sessions.

2.15 Key Stakeholders

Applied research involves collaborating with a number of key stakeholders and negotiating a research question and design outline in order to meet the needs of all the stakeholders involved. With regards to the current study, the researcher had to consider Nottingham University's requirements for doctoral research, Local Authority and Educational Psychology Service priorities, the needs of the school who took part in the study, along with the researcher's own interests and ideas.

Several key stakeholders were therefore involved in the implementation of the current study and the challenges associated with this will now be discussed further.

Stakeholder 1 – University of Nottingham

The University, as part of the Development and Collaborative Research Project, offered 4 key priority areas for trainees to choose from when devising their research which reflected both local and national priorities.

The broad research question chosen as the focus for the current study is as follows:-

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

The researcher had to therefore formulate a research question and design that fitted within a priority area.

Furthermore, all practitioners were required to utilise Goodman's (1997) Strengths and Difficulties Questionnaire (SDQ) as part of their research and this would therefore need to fit appropriately within the research design.

Stakeholder 2- Trainee's Educational Psychology Service

The researcher's Educational Psychology Service also played a key role in formulating the design of the study, as their keen interest in the area of MI meant that they were able to offer access to a number of pertinent resources, which may have otherwise been unavailable. As all of the members of the Educational Psychology Service had recently undergone training in the field of MI, it was an area of much curiosity and there was keen enthusiasm to promote and apply the principles of MI in casework, which further provided

the researcher with opportunities to become more involved in and contribute new evidence in this area.

Stakeholder 3- The School Where The Study Took Place

The researcher further considered the school where the study took place as a key stakeholder in the process. The researcher initially spent some time with the Head Teacher explaining the purpose and rationale of the impending study. This took the form of a 30 minute presentation, followed by a meeting with the KS3 Pastoral Support Leader to discuss the feasibility of implementing the research study in the school with Y8 pupils. The researcher had to therefore be very flexible and take account of the schools needs. As discussed earlier, the researcher's intended year group was initially Y9. However, in negotiation with the school this later became Y8.

During the implementation of the project the school underwent an Ofsted inspection and were issued with a notice to improve. This meant that the Pastoral Support Leader was then unable to attend all of the MI sessions, as she was involved in a number of other development meetings. Relationships within the school appeared strained as regular review meetings were arranged to discuss school progress and members of staff were also given heavier workloads and undertaking multiple roles. Unfortunately, this meant that the researcher's communication with the Pastoral Support Leader was diluted, as the study was not seen as a priority for the school at that time. This was further apparent when trying to gather some of the outstanding questionnaires.

As the researcher was often unable to meet with or speak to the Pastoral Support Leader, much of the communication attempts took place via email. One session was cancelled by the school with very little notice and the researcher had to therefore be very flexible with days/times to fit another session in during the same week.

Following the Ofsted inspection, the school were further reluctant to remove pupils from certain lessons to take part in the intervention and prior to running the last 2 groups, the researcher was given a specific day and time on which the intervention *had* to take place. The room location was also changed part way through the project, as the school required it for other purposes and so the group were then moved into a classroom in a much busier area of the school.

The researcher acknowledges that this disruption may have impacted on the outcome of the study, as well as the pupils, the researcher and the staff. The self-esteem, resiliency and SDQ measures may, therefore, have been influenced as a result of what was happening in the school at that time.

2.16 Participants

Sample

48 Year 8 pupils, aged 13-14, were selected from a sample of 150 in a mainstream secondary school in a rural area of North Lincolnshire.

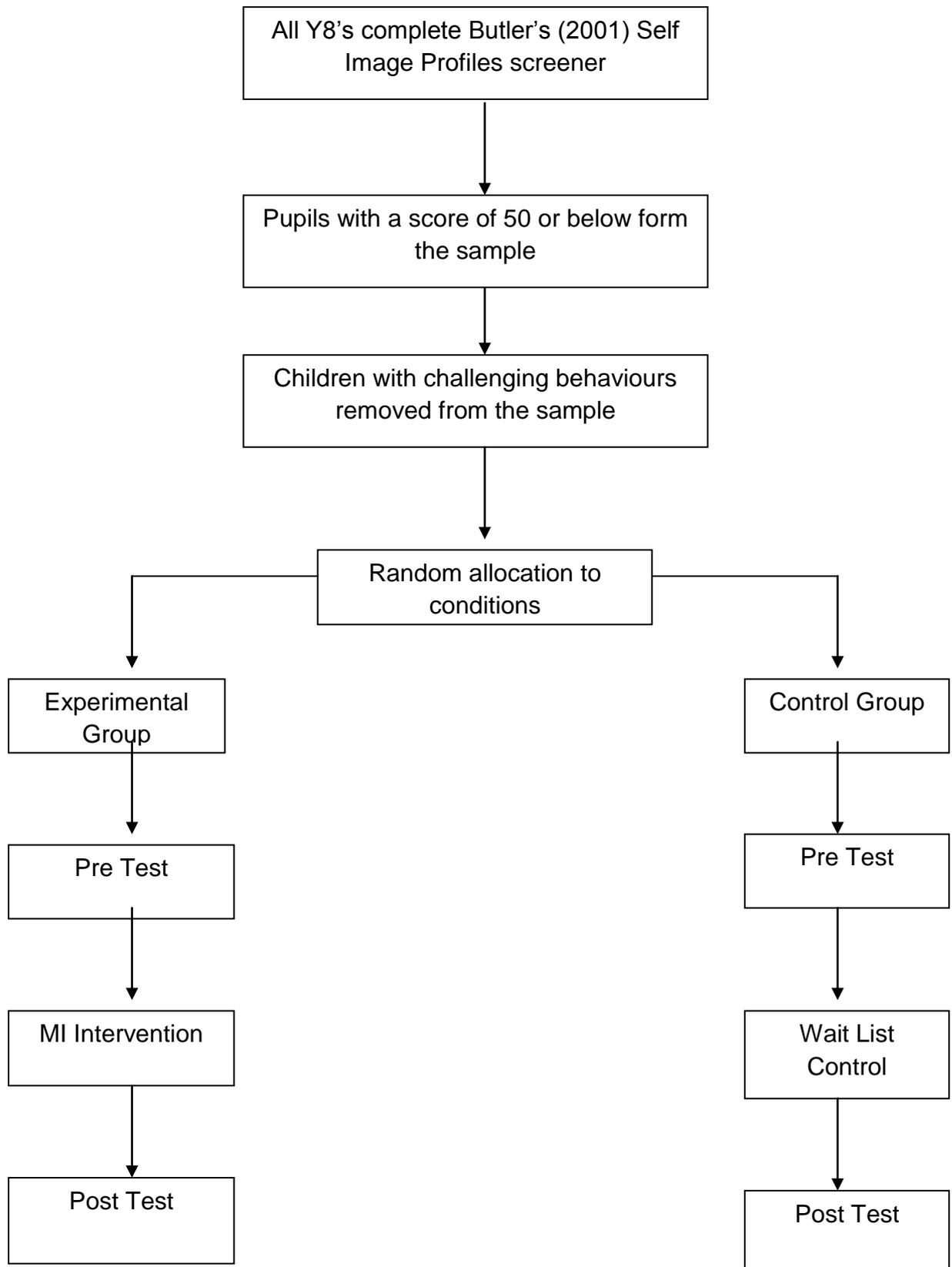
Three schools were approached by the researcher and asked if they would like to take part in the study, but the current school was the only one which responded to the researcher's request favourably. As a key stakeholder, the researcher's Educational Psychology Service initially selected these schools as ones that the trainee could approach.

All of the pupils were initially asked to complete the Self Image Profiles questionnaire (Butler 2001) which provides a sketch of an individual's view of themselves. It has been described as being a particularly valuable measure in planning the direction of intervention programmes (Bulter 2001). The 48 pupils with the lowest self image scores out of the sample (scoring 50 and below) and who were less positive about themselves were then randomly allocated to one of two conditions. The researcher increased the cut off score

provided in the manual by Butler (2001) from 30 to 50, so as to be able to form a sample with more participants. Pupils with challenging behaviours were excluded from the study prior to random allocation. This comprised of two pupils who were at risk of permanent exclusion due to their unacceptable behaviour towards members of staff and peers. It was felt strongly by the school that the pupils' involvement in a group based intervention at the time would have been unmanageable and may have unsettled the dynamics of the group. There was also no other adult support available at the time to support the pupils in the sessions.

The sample was a mixed group design. 24 pupils were in the experimental group and received a five week Motivational interviewing intervention, each session lasting for 50 minutes. 24 pupils formed a wait list control group and received a delayed intervention. None of the pupils who participated in the study were on the Special Educational Needs register (SEN), looked after children (LAC), had English as an additional language (EAL) or were Black Minority Ethnic (BME). All of the pupils who took part in the study were White British (WB). See Figure 2a below that details the sequence and process of the researcher's experimental design.

Figure 2a: An overview of the researcher's sequential steps in the current design



Ethical considerations relating to the design, sample and work undertaken with the participants have been addressed in the ethics section of this chapter.

Attrition

Issues of attrition are to be expected in applied research. Experimental design literature highlights how participant morbidity is common, particularly in studies which run for a lengthy period of time (Kazdin 2003). However, high levels of attrition can create a number of threats to the validity of the study such as altering the composition of the groups, restricting generality of the findings and reducing sample size and statistical power.

Unfortunately, in the current study, two pupils left the school part way through the project (one participant from the control group and one from the experimental group), so they did not receive the full intervention and post measures could not be undertaken. As this was a very small number of participants and due to the fact that the drop out was not a result of the intervention per se, further follow up around this issue was not considered necessary by the researcher. The data was therefore not utilised during the analysis phase and was later safely discarded.

Parents/Carers

The participants' parents/carers were also involved in the study, as they were asked to complete the parent version of Goodman's (1997) SDQ, both before and after the intervention. Unfortunately, the return rate for the questionnaires was extremely limited, so it was difficult to use this data in the analysis due to a lack of completed questionnaires. This data was therefore not utilised and also safely discarded.

Implementer

The researcher (Trainee Educational Psychologist) delivered the MI intervention and was familiar with the materials and principles of MI, having received input at university in the form of two modules. These modules provided trainee's with the opportunity to explore the theory–practice links underpinning MI and practise and rehearse elements of the approach.

The researcher further had the opportunity to use the 'Facilitating Change' (Atkinson 2005) programme before with a number of individuals in case work. The researcher was also familiar with the pre and post measures, having used them prior to the research study in casework.

The school's KS3 Pastoral Support Leader also attended some of the sessions to support the researcher and the pupils taking part in the intervention. The leader is a white British female aged 45. Her role in the school is to provide support and advice to students, in line with promoting their social care and personal development with respect to learning and health and safety.

2.17 Intervention

The researcher delivered the Motivational Interviewing intervention in the school on Tuesday and Friday mornings during the period July 2009 and January 2010 using the 'Facilitating Change' materials produced by Cathy Atkinson (2005). The intervention ran on four occasions with six participants in each group, each session lasting approximately 50 minutes.

The materials comprise of a well-structured five session programme which encourages young people to think about and change aspects of their behaviour. The structure of the sessions taken from the 'Facilitating Change' (Atkinson 2005) materials is shown below:

- Session 1: Thinking Positively
- Session 2: Understanding Yourself
- Session 3: Understanding Change
- Session 4: Stages of Change
- Session 5: Change and Me

2.18 Pre and Post Measures

The researcher utilised three measures pre and post the MI intervention. These were the Resiliency Scales for Children and Adolescents (Prince-Embury 2007), The Self Image Profiles (Butler 2001) and The Strengths and Difficulties Questionnaire (Goodman 1997). A more detailed description of each measure and the justification for selection will now follow:

Resiliency Scales for Children and Adolescents – A Profile of Personal Strengths

Pupils completed the Resiliency Scales for Children and Adolescents (Prince-Embury 2007) pre and post intervention. The Resiliency Scales systematically identify and quantify core personal qualities of resiliency in youth and can be used by children and adolescents between the ages 9-18. They are three brief self-report scales each comprising of 20-24 items which are designed to identify areas of perceived strength and/or vulnerability. Response options are ordered on a five point likert scale: 0 = never, 1 = rarely, 2 = sometimes, 3 = often and 4 = almost always. The scales comprise of statements such as 'It is easy for me to get upset' and ' If I have a problem, I can solve it' and participants are asked to select the response option relevant to them. Higher scores for sense of mastery and sense of relatedness scales indicate greater resilience, whereas higher scores on the emotional reactivity sub scale indicate more vulnerability.

The scales are self-report, due to the fact that the notion of resiliency is mediated through the subjective experience of the individual and some argue that self-reports are a more valid way of measuring this (Berg-Nielsen, Vika and Dahl 2003). Prince-Embury (2007) reported that the scales may further be utilised with individuals for treatment planning, counselling, outcome monitoring and as a guide for intervention.

The Resiliency Scales draw upon three core theoretical domains and these are summarised below:-

Table 2b: A table exploring the underlying concepts of the 3 core domains that make up the Resiliency Scales

Scale	Concepts
Sense of Mastery (MAS)	<ul style="list-style-type: none"> • Optimism about life and one's own competence • Self-efficacy • Adaptability
Sense of Relatedness (REL)	<ul style="list-style-type: none"> • Sense of trust • Perceived access to support • Comfort with others • Tolerance and the capacity to have differences
Emotional Reactivity (REA)	<ul style="list-style-type: none"> • Sensitivity • Recovery • Impairment

(Prince-Embury 2007)

The Resiliency Scales come in several forms. Individuals can administer individual stand-alone subtests/scales or use a combination booklet, which

combines all three of the resiliency scales. The researcher chose to utilise the combination version of the Resiliency Scales so as to be able to measure the three core domains: sense of mastery, sense of relatedness and emotional reactivity. Raw scores for each scale are obtained by summing up all item scores for each scale. Items are scored 0 for responses of never, 1 for responses of rarely, 2 for responses of sometimes, 3 for responses of often and 4 for responses of almost always. These raw scores can also be converted into standardised T scores, which plot a profile across subtests for comparative purposes.

The self-report measures are simple to administer and should take approximately 9-15 minutes for adolescents to complete (Prince-Embury 2007).

The standardised sample comprised of 200 children aged 15 to 18 and matched to the U.S. census by ethnicity and parent education level within sex and age band. Cronbach's alpha coefficients ranged from .93 to .95 for the full sample demonstrating good internal consistency. The standard error of measurement ranged from .90 to 2.45 for the total sample on all subscales, indicative of good reliability.

As it is a relatively new measure, the researcher acknowledges that there is a lack of evidence, demonstrating the use of the resiliency scales, in measuring the effect of interventions. However, data indicates that the scale demonstrates good internal consistency and reliability, is simple to administer and complete and examines three important sub scales of resilience that other scales do not. The researcher also firmly believes that these scales closely complement the content of the MI programme and therefore regards it as a highly suitable measure for the current study. A more detailed discussion regarding the links between the independent and dependent variables will follow later.

The Self Image Profiles (SIP-A)

Pupils further completed the Self-Image Profiles scale (Butler 2001). The Self Image Profiles scale for Children and Adolescents was devised by Butler in 2001 and is built upon elements of Kelly's Personal Construct Theory (Kelly 1955) and Harter's (1999) developmental and organisational model of self.

The Profiles are brief self-report measures providing visual display of both self-image and self-esteem and tap an individual's theory of self. Individuals are first asked to rate their actual self by indicating 'How I am' against 25 items using a likert scale (0 = not at all, 6 = very much) and then are asked to rate their ideal self by indicating 'How I would like to be' against the same 25 items. Statements include 'kind', 'helpful' and 'good looking'. The discrepancy scores between the two then provide an estimate of their self-esteem. A high self-esteem score reflects a wide discrepancy between 'How I am' and 'How I would like to be' and is symptomatic of low self-esteem. McLean (2003) reported that discrepancies between the actual and ideal self creates an approach orientation, a move towards the individual's ideal goal to eliminate a discrepancy.

The SIP-A can be completed at different time periods to check on progress or to monitor the effects of treatment or interventions and is intended for use by individuals aged 7 and above. The SIP-A should take approximately 9-17 minutes to complete by adolescents (Butler 2001).

Standardisation of the SIP-A involved 341 pupils across three secondary schools in Leeds. Coefficient alpha was calculated for self image demonstrating 0.69 for positive self image and 0.79 for negative self image. In devising the scale, Butler encouraged samples of children and adolescents to describe themselves in 3 ways, and the most frequently elicited descriptions were later used as items on the measure.

The principles underlying the SIP-A are displayed below:

- A distinction between self image and self-esteem has been established
- Item descriptions/terminology are representative of the target population
- Butler advocates a developmental notion of self – concrete verbal representations
- Self is multidimensional and hierarchical
- Self as unique
- Self descriptions as contrasts
- Transparency
- Fragmentation
- Assesses only one's psychological self

(Adapted from Butler 2001, p. 3-4)

Once complete, the scales provide an immediate visual display of an individual's ideal self and actual self. Four scale scores can also be calculated for positive self-image (sum of 1-12), negative self-image (sum of items 14-25), sense of difference (item 13) and self-esteem (sum of discrepancy scores).

Butler and Gasson (2005) reviewed 14 of the most frequently cited self esteem / self concept measures and reported that the Self Image Profiles is the only measure to explicitly describe itself within a theoretical framework. From those reviewed, Butler's measure was also the only one to have been developed in the UK. Furthermore, 'only the Butler SIP elicited self descriptions from children and adolescents, to form items with a shared meaning and readily understood by the population, from whom the scale was designed to be employed' (Butler and Gasson 2005, p.198). Butler's scale

also explores different versions of self, measuring both self-image and self esteem.

These findings helped inform the researcher in selecting an appropriate, suitable measure to evaluate the current intervention. In addition, its ease of administration and completion, good reliability and validity and the fact that it was age appropriate, meant that the researcher deemed the Self-Image Profiles (Butler 2001) as a fitting measure to assess pupil self-esteem in the current study.

Strengths and Difficulties Questionnaire (SDQ)

Goodman's Strength's and Difficulties Questionnaire (1997) was also completed pre and post intervention by the pupils, their parents/carers and teachers to gain views on pupils' mental well being (See appendix 2). The SDQ is a brief behavioural screening questionnaire and consists of 25 items within five areas and aims to assess the psychological adjustment of children and young people aged 3-16.

The five areas comprise of:

- Peer relationships
- Emotional symptoms
- Hyperactivity/attention
- Conduct problems,
- Pro-social behaviour.

The SDQ is easily available and accessible via the SDQ website in a vast number of languages, with no cost implications. The measure focuses on an individual's strengths, as well as their difficulties. Questions include 'I try to be nice to other people, I care about their feelings' and individuals are asked to provide answers on the basis of how things have been over the past six months answering: not true, somewhat true or certainly true.

Scores are then generated for each of the five areas and a total difficulties score can further be calculated by totalling the scores in the areas of peer relationships, emotional symptoms, hyperactivity and conduct problems. The SDQ questionnaires can be scored online or through the use of a scoring syntax. These options are explained more fully on the SDQ website: www.sdqinfo.com.

As the University of Nottingham are involved in a national collaborative research project, all researchers were required to utilise the SDQ measure as part of their research. In addition to this requirement, the researcher is aware of the usefulness of the SDQ and how it has proved successful when applied in a number of settings. 'Before and after SDQ's can be used to audit everyday practice and to evaluate specific interventions. Studies using the SDQ, along with research interviews and clinical ratings, have shown that the SDQ is sensitive to treatment effects' (Youth in Mind 2005, p. 1). The SDQ has further been reported to maintain good validity and reliability, with the total difficulties score providing adequate internal reliability ($r=0.76$) and good test– retest reliability ($r=0.85$) (Goodman 1999, 2001).

The Strengths and Difficulties Questionnaire has also more recently been described as an effective tool in measuring children's psychological well being and mental health on a wider scale. A review by Wolpert et al (2009) concluded that the SDQ could be used alongside other measures to assess and evaluate service outcomes for Child and Adolescent Mental Health Services (CAMHS).

Studies have further indicated that the teacher and parent components of the SDQ have produced results consistent with other behaviour rating scales i.e. Rutter's Child Behaviour Rating Scale and Achenbach's Child Behaviour Checklist (Goodman 1999).

2.19 Links Between the MI Intervention (IV) and the Assessment Tools (DV's)

As discussed in detail above, the assessment tools used to measure the impact of the MI intervention were The Resiliency Scales for Children and Adolescents, The Self Image Profile for Adolescents (SIP-A) and The Strengths and Difficulties Questionnaire (SDQ). These measures were deemed suitable and relevant for the current study by the researcher.

See table 2c below for a more comprehensive exploration of the links between the individual MI sessions and the assessment tools used, further supporting the researcher's rationale and decision to utilise these in the current study.

Table 2c: A table to show connections between the MI sessions and the domains measured by the 3 assessment tools

Session	Domains measured by assessment tools
1: Thinking Positively	Mastery (Resiliency scales) Relatedness (Resiliency scales) Self-esteem (Self Image Profiles) Emotional reactivity/symptoms (SDQ/ Resiliency Scales)
2: Understanding Yourself	Mastery (Resiliency scales) Self-esteem (Self Image Profiles) Relatedness (Resiliency scales) Emotional reactivity/symptoms (SDQ/Resiliency Scales) Peer relationships (SDQ)
3:Understanding Change	Mastery (Resiliency Scales) Relatedness (Resiliency Scales) Self-esteem (Self Image Profiles)
4:Stages of Change	Mastery (Resiliency Scales) Emotional reactivity/symptoms (SDQ)
5:Change and Me	Mastery (Resiliency Scales) Self-esteem (Self Image Profiles) Relatedness (Resiliency Scales) Peer relationships (SDQ)

2.20 Ethics

The researcher adhered to The British Psychological Society's Code of Ethics and Conduct (2009) throughout the implementation of the current study and focused heavily on the four domains of responsibility that ethical issues are considered:

- **Respect**
- **Competence**
- **Responsibility**
- **Integrity**

(BPS 2009)

All participants were aware of the nature of the current study and informed consent was obtained for them to take part. The researcher spoke to all of the participants at the outset of the research about the aims of the study and further provided a general overview of the 5 week programme that was to be undertaken. Participants were further notified of the right to withdraw from the research study at any time. Parental permission for pupil involvement was also requested (See appendix 3).

Issues around confidentiality were discussed and school and participant anonymity was assured.

Participants were fully debriefed following the intervention and the outcomes of the study were shared with key members of staff, with any potential limitations being acknowledged. School, participants and parents will further be offered access to the information, should they desire. Following a discussion with the school, a protocol was agreed that all pupils/parents wishing to know more about the purpose/outcome of the study, should initially speak to the Pastoral Support Leader as the contact, who would then get in touch with the researcher to arrange further discussions.

The researcher strived to treat all participants with respect and ensured that they were fully aware of the procedures involved in the study.

As the study potentially identifies vulnerable individuals, this raises ethical concerns. Therefore, the wait list control condition will receive the MI intervention next term to ensure ethical guidelines are strictly adhered to.

As described in the participants section of this chapter, children with severe and challenging behaviours were excluded from this study. However, the researcher believes that it is important to note that these children were receiving support from external agencies, including an Educational Psychologist from the researcher's current service. Therefore, ethical concerns regarding the identification of these vulnerable pupils and the support they received was addressed.

Although anonymity of the school and the participants was assured in the final write up of the thesis, the researcher's concerns regarding several of the participant's self reports on their post questionnaires meant that ethically a discussion about this needed to take place with the school, to ensure appropriate measures were taken to support these pupils. A discussion outlining the researcher's concerns took place with the Pastoral Support Leader who then intended to follow this up by spending some time with the pupils individually.

As the study involved randomly allocating participants to either an experimental or control group, some may suggest that this restricts participant choice. Pawson and Tilley (1997) suggest that 'choice is the very condition of social and individual change and not some sort of practical hindrance to understanding that change' (Pawson and Tilley 1997, p.36). They suggest that participants should volunteer to take part in research rather than be selected. The researcher ensured however, that all participants were advised that they had the choice of whether or not they wished to participate, and also that they could choose to withdraw at any time. The researcher strongly believes therefore, that whilst acknowledging Pawson and Tilley's viewpoint, the study is still acting in accordance with the BPS ethical guidelines.

2.21 The Final Design

The researcher employed a fixed design to explore the impact of a group based motivational interviewing intervention on pupil self-esteem and resilience. The Self-Image Profile (Butler 2001) and the Resiliency Scales for Children and Adolescents (Prince-Embury 2007) were used to measure this pre and post intervention. The SDQ (Goodman 2007) was also utilised to measure teachers' and pupils' views of pupils' mental well being.

The Independent Variable (IV) comprised of two conditions; the Motivational Interviewing condition and the wait list control condition (who will receive the MI intervention later). The Dependent Variables (DV) involved using the Self Image Profile to measure pupil self-esteem; the Resiliency Scale for Children and Adolescents to measure pupil resiliency and the Strengths and Difficulties Questionnaire to measure mental well being. See table 2d below for the design strategy applied to the current study.

Table 2d: A table to show the structural design of the researcher's experimental study

Participants	Intervention	Who delivered	Number of participants in each condition
Y8 pupils	MI intervention	Trainee Educational Psychologist (TEP) supported by Pastoral Support Leader	N=6
Y8 pupils	MI intervention		N=6
Y8 pupils	MI intervention		N=6
Y8 pupils	MI intervention		N=6
			(Total N=24)
Y8 pupils	Wait list control	Class Teachers	N=24

2.22 Analysis

The researcher intends to input all of the information collected from the pre and post questionnaires into the software package SPSS version 17 to aid the statistical analysis of the data. Descriptive statistics will initially be provided to explore the shape of the data. A 2*2 mixed ANOVA will then be employed to test for significant differences between the two groups. The first within group factor is time, as data was collected at two different periods, pre and post intervention. The between group factor comprises of two levels; the experimental condition, who receive the Motivational Interviewing intervention and the wait list control condition, who will receive a delayed intervention. The researcher intends to use an ANOVA in the analysis of the data, should the data meet all of the requirements, as it is a parametric test that is considered a more powerful form of analysis. Following any significant findings, an inferential statistical test (T test) will then be employed to explore the within and between group differences. This will take the form of both independent and paired t tests.

Let us turn now to Chapter Three, the results section, to examine the researcher's findings.

Chapter 3 - Results

3.1 Dependent Variable Measures

The dependent variables in the current study are self-esteem, resilience and mental well being. The measures used to assess the dependent variables include the Self-Image Profiles for Children and Adolescents (Butler 2001), The Resiliency Scales for Children and Adolescents (Prince-Embury 2007) and the Pupil and Teacher Strengths and Difficulties Questionnaires (Goodman 1997).

3.2 Analysis

All of the data was initially input into the software package SPSS version 17 to aid the statistical analysis of the data. Descriptive statistics were examined to explore the shape of the data. A 2*2 mixed Analysis of Variance (ANOVA) was then considered an appropriate form of testing and was employed on each of the variables. An Analysis of Covariance (ANCOVA) was also employed on the self-esteem variable.

The within group factor is time, as data was collected at two time periods, pre and post intervention. The between group factor comprises of two levels, the experimental condition, who received the Motivational Interviewing intervention and the wait list control condition, who will receive a delayed intervention. Independent and paired t tests were further utilised to explore within and between group differences.

3.3 Requirements for Parametric Testing

Parametric tests are inferential tests that have greater statistical power. However, it is important that the data set meets certain assumptions prior to employing parametric testing. These requirements include: data that is

normally distributed, data that is drawn from populations with the same variance and data that is measured on an interval or ratio scale.

With regard to the current study, the data was checked using descriptive analysis and considered by the researcher as being suitable for parametric testing. Box plots, stem and leaf plots and histograms were employed to check that the data was normally distributed. Box plots highlighted that there were relatively few extreme scores. Levene's test for equality of variance was also undertaken on the data set and indicated that there was equality of variance, which is a clear requirement for parametric testing (Brace, Kemp and Snelgar 2009).

Tests of sphericity are also important when employing repeated measures ANOVA's. If sphericity can be assumed, normal degrees of freedom will be reported. If not, the Greenhouse Geisser output will be adopted. (Dancey and Reidy 2004). Furthermore, as the current study is a randomised control trial design, this *should* reduce the possibility of there being differences between participants in the two conditions.

3.4 Analysis of Resiliency Scores

Mastery Sub Scale

Figure 3a: A bar graph to show the mean pre and post mastery scores for both the experimental and the control group

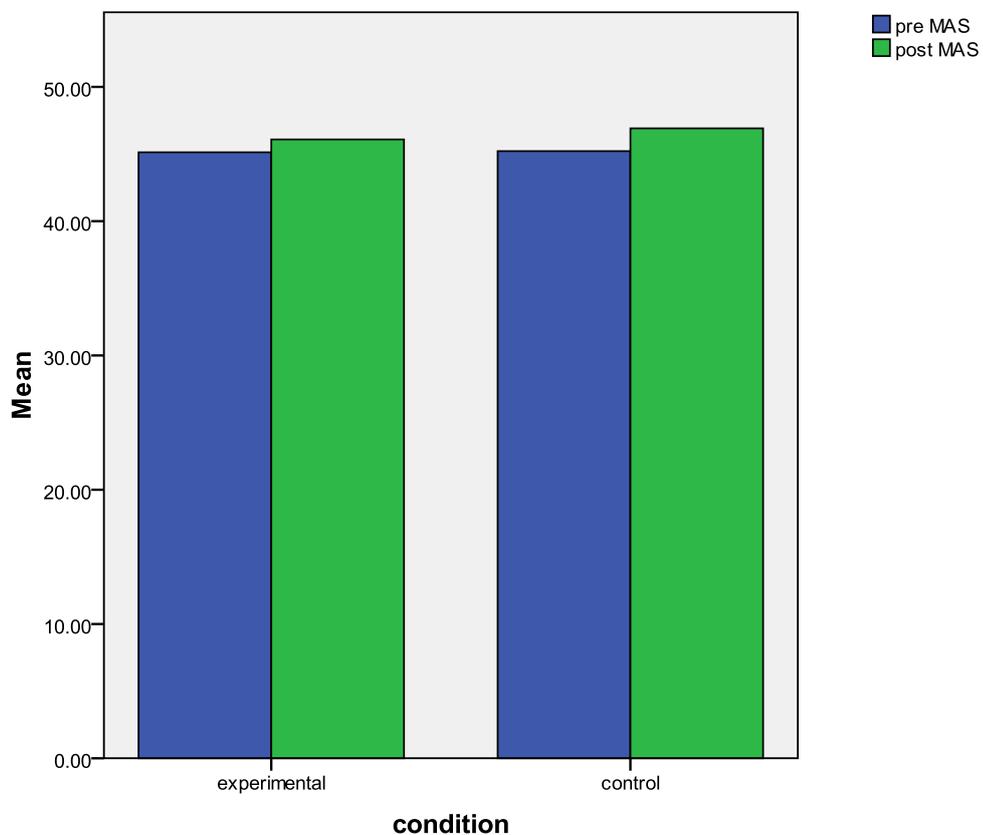


Figure 3a highlights the mean pre and post mastery scores for both the experimental (MI intervention) and control group. An increase in the scores at post testing indicates a boost in participants' sense of mastery.

Table 3a: A table highlighting the mean and SD for pupils pre and post mastery scores

	Pre		Post	
	Mean	SD	Mean	SD
Experimental	45.1	8.2	46.1	10.8
Control	45.2	10.8	46.4	10.0

From examining the data above, it is evident that the mean score for participants in the experimental condition has increased slightly from pre (M= 45.1, SD=8.2) to post (M=46.1, SD=10.8) testing, suggesting a small increase in their sense of mastery. A slight increase in the control group scores is also evident from pre (M=45.2, SD=10.8) to post testing (M=46.4, SD=10.0).

A 2*2 mixed ANOVA was employed on the mean pre and post mastery scores. The main effect of time was not statistically significant: $F(1, 44) = 1.119, P = 0.296$. The interaction between condition and time was also not statistically significant: $F(1,44) = 0.087, P = 0.769$.

3.5 Relatedness Sub Scale

Figure 1b: A bar to show the mean pre and post relatedness scores for both the experimental and the control group

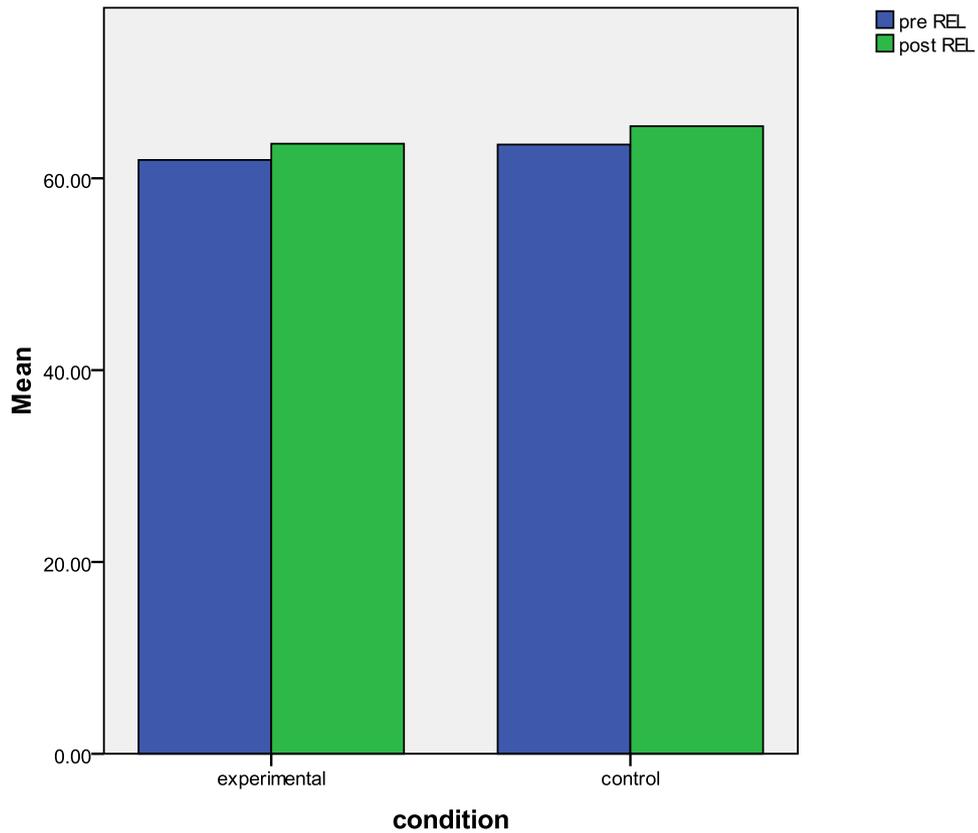


Figure 3b highlights the mean pre and post relatedness scores for both the experimental (MI intervention) and control group. An increase in the scores at post testing indicates a boost in participants' sense of relatedness.

Table 3b: A table to show the mean and SD pre and post relatedness scores

	Pre		Post	
	Mean	SD	Mean	SD
Experimental	61.9	13.9	63.6	13.4
Control	63.5	14.6	65.4	13.7

From examining the data above, it is evident that the mean score for participants in the experimental condition has increased from pre (M= 61.9, SD=13.9) to post testing (M=63.6, SD=13.4), suggesting an increase in their sense of relatedness. An increase in the control group scores is also evident from pre (M=63.5, SD=14.6) to post testing (M=65.4, SD=13.7).

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = 1.182, P = 0.283$. The interaction between condition and time was also not statistically significant: $F(1, 44) = 0.004, P = 0.948$.

3.6 Emotional Reactivity Sub Scale

Figure 3c: A bar graph to show the mean pre and post emotional reactivity scores for both the experimental and the control group

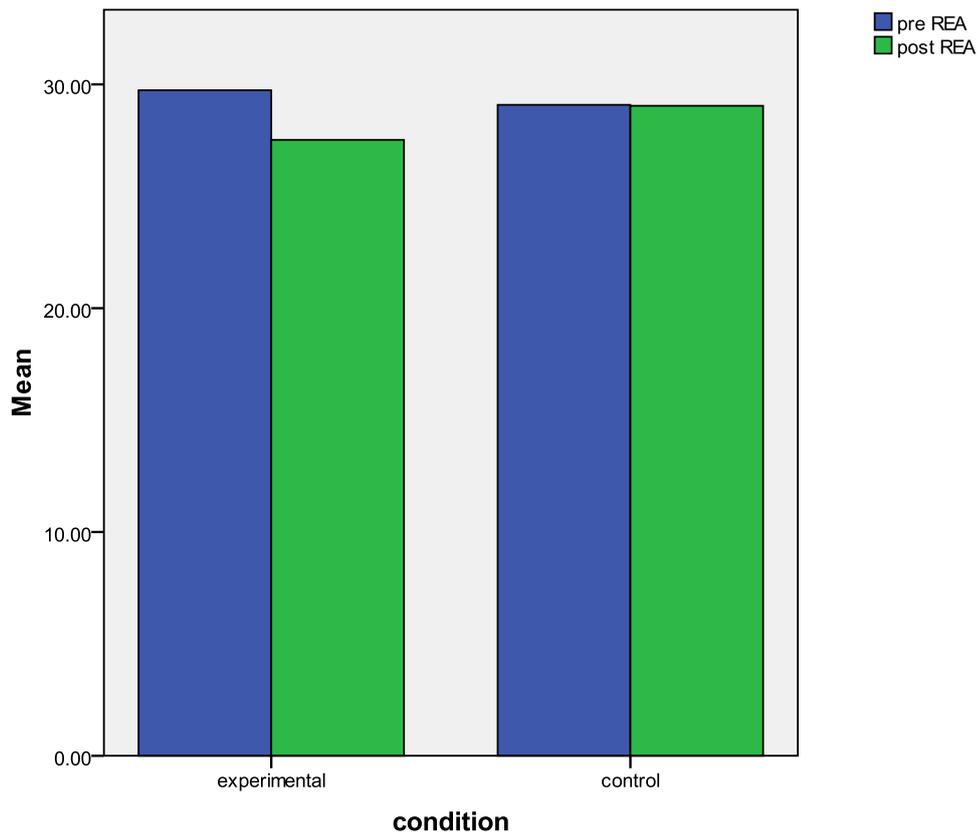


Figure 3c highlights the mean pre and post emotional reactivity scores for both the experimental (MI intervention) and control group. A decrease at post testing indicates an improvement in participants' emotional reactivity.

Table 3c: A table to show the mean and SD pre and post emotional reactivity scores

	Pre		Post	
	Mean	SD	Mean	SD
Experimental	29.7	13.8	27.5	14.9
Control	29	10.4	29	14.6

It is evident from examining the mean scores, that pupils in the experimental group demonstrate improvements in their levels of emotional reactivity from pre (M=29.7, SD= 13.8) to post testing (M=27.5, SD=14.9), whereas the control group have remained the same from pre (M=29, SD=10.4) to post testing (M=29, SD=14.6).

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = .663, P = 0.420$. The interaction between condition and time was not statistically significant: $F(1, 44) = .613, P = 0.438$.

In summary, analysis indicates that there is no significant difference in the resiliency scores between participants in the Motivational Interviewing condition and the wait list control condition.

Therefore, the experimental hypothesis must be rejected and the null hypothesis accepted. That is, that there will be no significant difference in the resiliency scores between participants in the Motivational Interviewing condition and the wait list control condition.

Let us turn now to investigate the impact that the MI intervention had on pupil self-esteem.

3.7 Analysis of Self-Esteem Scores

Figure 3d: A bar graph to show the mean pre and post self-esteem scores for both the experimental and the control group

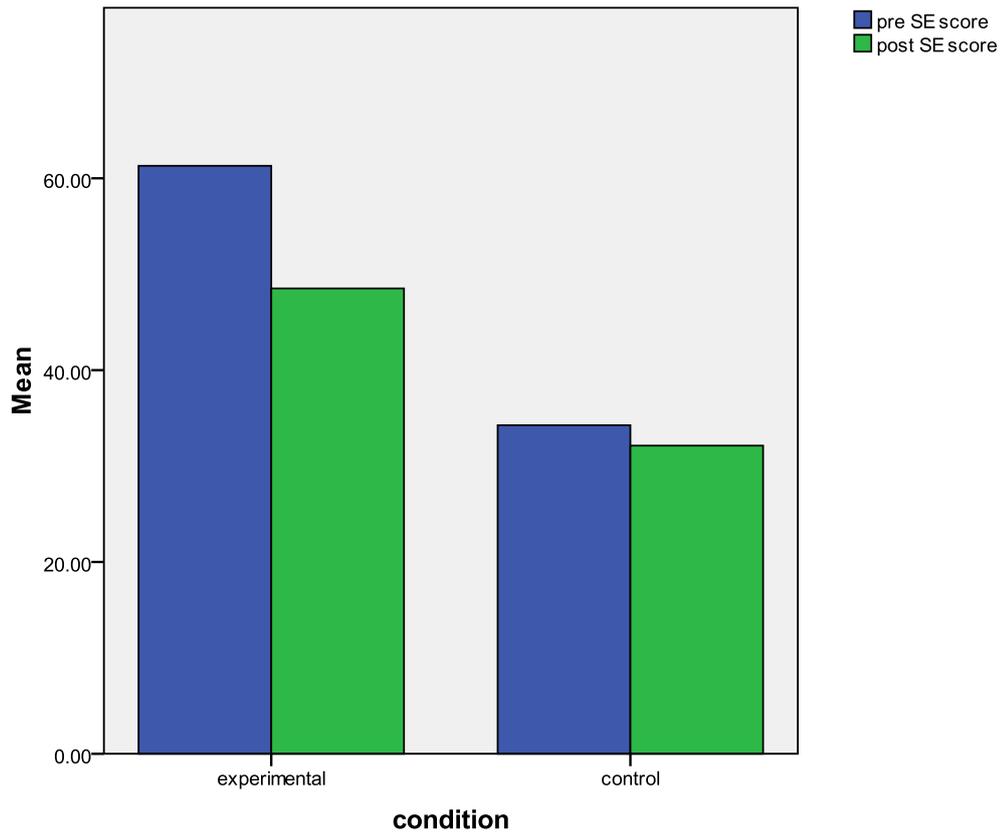


Figure 3d highlights the mean pre and post self-esteem scores for both the experimental (MI intervention) and control group. A reduction in the self-esteem score, at post testing, indicates an increase in participants' self-esteem.

Table 3d: A table highlighting the mean and standard deviations (SD) for pupils' pre and post self-esteem scores

	Pre		Post	
	Mean	SD	Mean	SD
Experimental	61.3	15.6	48.5	19.8
Control	34.3	19.3	32.1	15.7

Table 3d highlights the mean and SD for both the experimental (MI intervention) and control groups pre and post self-esteem scores.

From examining the data above, it is evident that the mean score for participants in the experimental condition has dropped considerably from pre (M=61.3, SD=15.6) to post testing (M=48.5, SD=19.8), suggesting an increase in their self-esteem. A small decline in the control group scores is also evident from pre (M=34.3, SD=19.3) to post testing (M=32.1, SD=15.7).

A 2*2 mixed ANOVA was employed on the mean pre and post self-esteem scores. The main effect of time was statistically significant: $F(1, 44) = 8.635$, $P = 0.005$. The interaction between condition and time was also statistically significant: $F(1, 44) = 4.406$, $P = 0.042$.

Paired T Test – Self-Esteem

The paired t test was used for within group comparisons. There was a significant difference between participants' pre and post self-esteem scores in the experimental group: $t = 3.163$, $df = 22$, $P = 0.005$.

A paired t test showed that there were no significant difference between participant's pre and post self-esteem scores in the control group: $t = .694$, $df = 22$, $P = 0.495$.

Independent T Test - Self-Esteem

The independent (unrelated) t test was used to compare group differences. There was a significant difference between the groups at pre testing: ($t=5.220$, $df = 44$, $P = <0.01$). There was also a significant difference between the groups at post testing: ($t = 3.110$, $df = 42$, $P = 0.003$).

Analysis of Covariance (ANCOVA)

Based on the findings from the preliminary analysis, an ANCOVA was then considered suitable due to the fact that there were baseline differences between groups. As there was a significant difference between the experimental and control group at pre testing on the self esteem measure ($t=5.220$, $df = 44$, $P = <0.01$), an ANCOVA was employed to examine the effect of the independent variable on the dependent variable measure, whilst co varying out the effect of the pre test scores.

An ANCOVA is often described as a combination of an ANOVA and multiple regression and is commonly used in pre–post test designs that involve participants being given measures pre and post intervention (Brace, Kemp and Snelgar 2009).

The researcher initially tested for homogeneity of regression, as this was a requirement for undertaking an ANCOVA. As there was homogeneity of regression ($P = 0.992$) and a linear relationship, an ANCOVA was then considered a suitable form of analysis.

After adjusting for pre test scores, there was no significant effect of the between subjects factor condition $f(1,43) = 0.103$, $P > 0.05$, partial $\eta^2 = 0.002$.

Gain Score Analysis

In order to examine the impact of the intervention on participants' self esteem more closely, gain score analysis was employed to look at *each* individual's gain score in both conditions by subtracting their pre test score from their post test score.

By employing this process, it was evident that the experimental group demonstrated considerably wider gains from pre to post testing in comparison to the control group.

This type of analysis further assesses whether the means of the gain scores for the two groups are equal (Gliner, Morgan and Harmon 2003).

Changes from baseline were calculated for the outcomes and t tests for independent samples were employed. A statistically significant difference was found between the two groups $t = -2.099$, $df = 44$, $P = 0.042$.

In summary, it appears that there has been a significant within group increase in self-esteem for the experimental group, but not for the control group. Therefore, supporting the researcher's hypothesis that participants in the Motivational Interviewing condition will show significant increases in their self-esteem measured on Butler's Self Image Profile in comparison to the wait list control condition.

A more detailed discussion regarding the decision to accept the experimental hypothesis and the potential issues with some of the apparent conflicting results on this variable, will follow in the discussion chapter.

Let us turn now to explore the impact the MI intervention had on pupils' mental well being, as measured by Goodman's Strengths and Difficulties Questionnaire.

3.8 Analysis of Pupil Strengths and Difficulties Questionnaire

Figure 3e: A table to show the mean pre and post total difficulties score on the pupil SDQ for the experimental and control group

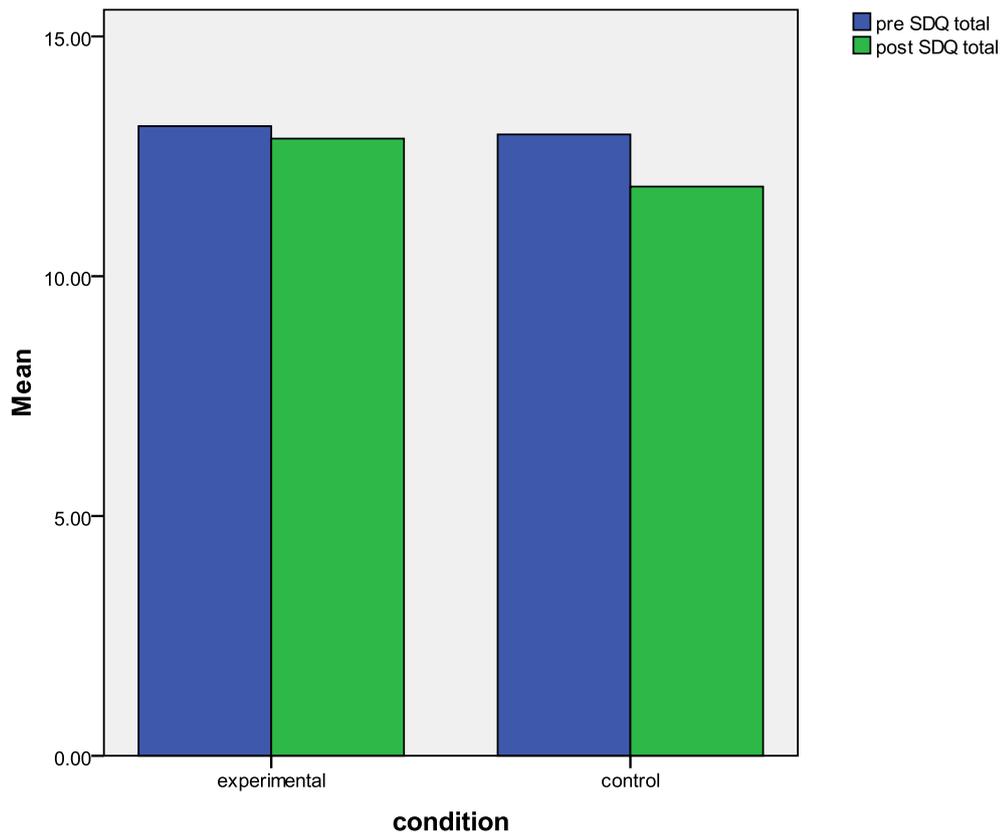


Figure 3e highlights the mean pre and post total difficulties scores for both the experimental (MI intervention) and control group. A decrease at post testing is positive as it indicates a reduction in the participants' total difficulties score.

Table 3e: A table to show the mean and SD pre and post total difficulties score on the pupil SDQ

	Pre		Post	
	Mean	SD	Mean	SD
Experimental	13.1	6.6	12.9	6.2
Control	13.0	4.7	11.9	5.0

It is evident from examining the mean scores that pupils in the experimental group demonstrate an improvement from pre (M=13.1, SD=6.6) to post testing (M=12.9, SD=6.2). The control also demonstrate gains in their total difficulties from pre (M=13, SD=4.7) to post testing (M=11.9, SD=5.0).

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = 1.521, P = 0.224$. The interaction between condition and time was not statistically significant: $F(1,44) = .571, P = 0.454$.

Further analysis, including 2*2 mixed ANOVA's and independent and paired t tests, were then undertaken on the five domains of the pupil SDQ.

3.9 Analysis of Pupils' Perceptions of Peer Relationships

Figure 3f: A bar graph to show the mean pre and post peer relationships score on the pupil SDQ for the experimental and control group

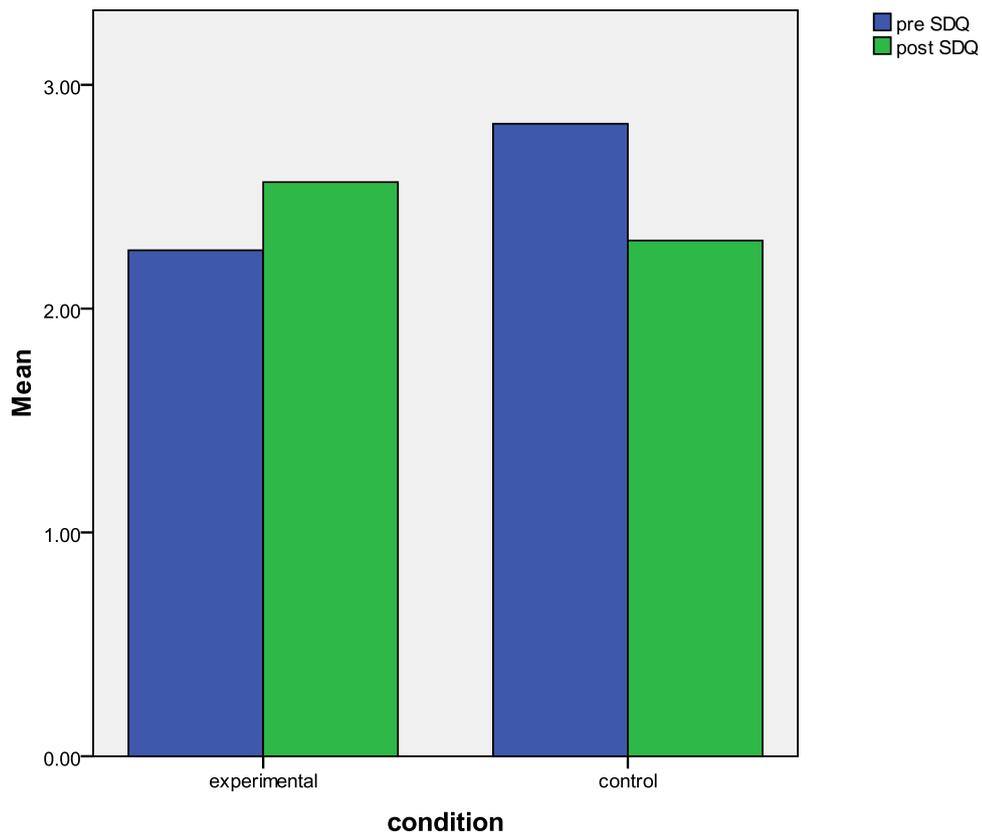


Figure 3f highlights the mean pre and post peer relationships scores for both the experimental (MI intervention) and control group.

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = .321, P = 0.574$. The interaction between condition and time was statistically significant: $F(1,44) = 4.628, P = 0.037$.

Paired T Test – Peer Relationships

The paired t test was used for within group comparisons. There was no significant difference between participants' pre and post scores in the experimental group: ($t = .1.159$, $df = 22$, $P = 0.259$).

A paired t test also showed that the difference between participants' pre and post scores in the control group was not significant: ($t = 1.862$, $df = 22$, $P = 0.076$).

Independent T Test – Peer Relationships

The independent (unrelated) t test was used to compare group differences. There was no significant difference between the groups at pre testing:

($t = 1.162$, $df=44$, $P = 0.252$). There was also no significant difference between the groups at post testing: ($t = .522$, $df = 44$, $P = 0.604$).

3.10 Analysis of Pupils' Perceptions of Emotional Distress

Figure 3g: A bar graph to show the mean pre and post emotional distress scores on the pupil SDQ for both the experimental and the control group

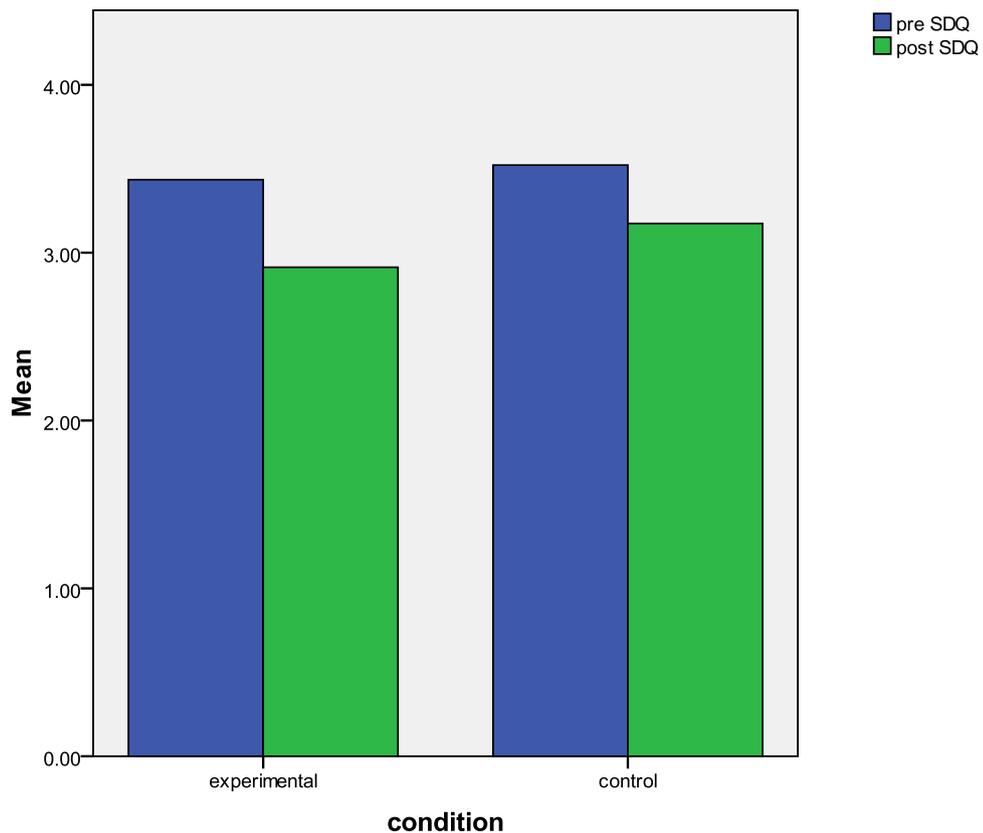


Figure 3g highlights the mean pre and post emotional distress scores for both the experimental (MI intervention) and control group. A decrease at post testing is positive.

From examining the mean scores in figure 3g above, it appears that although both groups have improved at post testing, the experimental group demonstrates slightly wider gains.

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = 2.676$, $P = 0.109$. The interaction between condition and time was not statistically significant: $F(1,44) = .107$, $P = 0.745$.

3.11 Analysis of Pupils' Perceptions of Behaviour Difficulties

Figure 3h: A bar graph to show the mean pre and post behaviour difficulties scores on the pupil SDQ for both the experimental and the control group

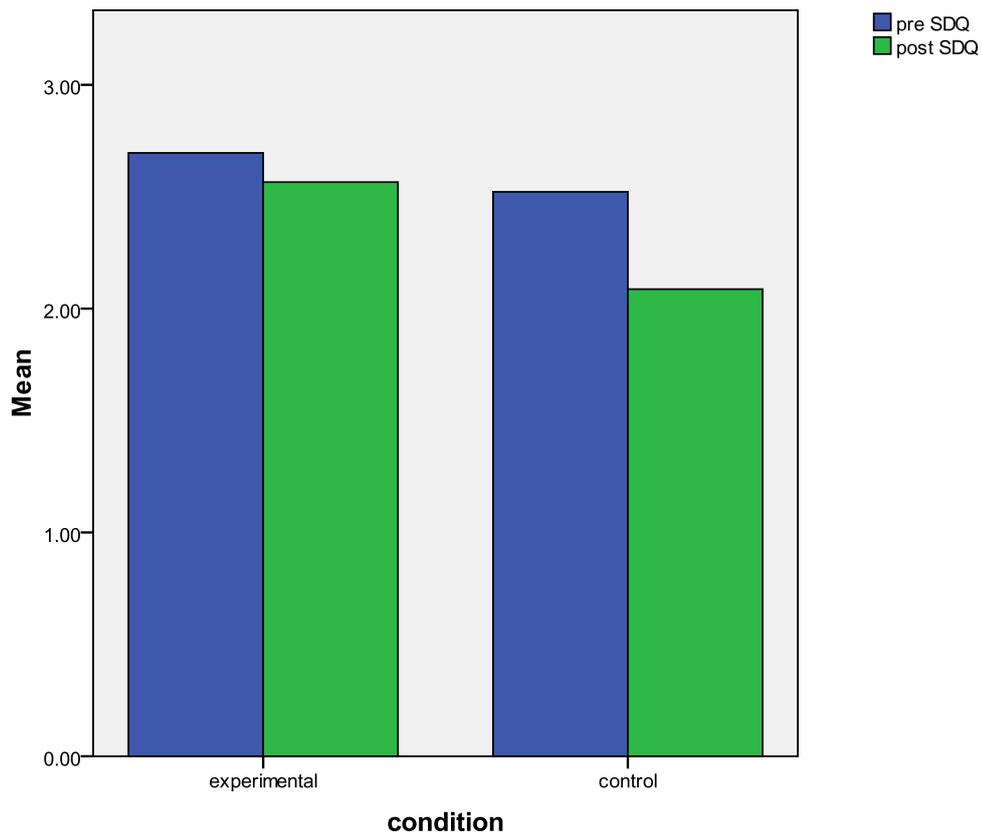


Figure 3h highlights the mean pre and post behaviour difficulties scores for both the experimental (MI intervention) and control group. A decrease at post testing is positive.

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = 1.965, P = 0.168$. The interaction between condition and time was not statistically significant: $F(1,44) = .570, P = 0.454$.

3.12 Analysis of Pupils' Perceptions of Hyperactivity

Figure 3i: A bar graph to show the mean pre and post hyperactivity scores on the pupil SDQ for both the experimental and the control group

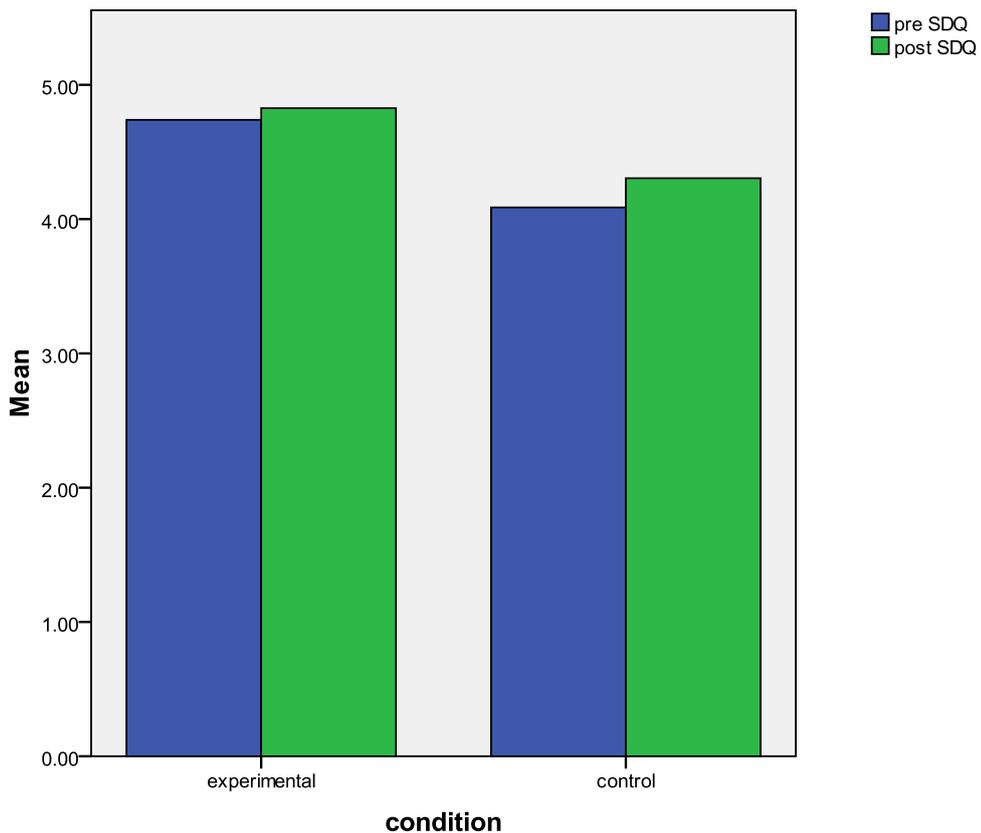


Figure 3i highlights the mean pre and post hyperactivity scores for both the experimental (MI intervention) and control group. A decrease at post testing is positive.

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = .452, P = .505$. The interaction between condition and time was not statistically significant: $F(1,44) = .083, P = .775$.

3.13 Analysis of Pupils' Perceptions of Pro Social Behaviour

Figure 3j: A bar graph to show the mean pre and post pro social behaviour scores on the pupil SDQ for both the experimental and the control group

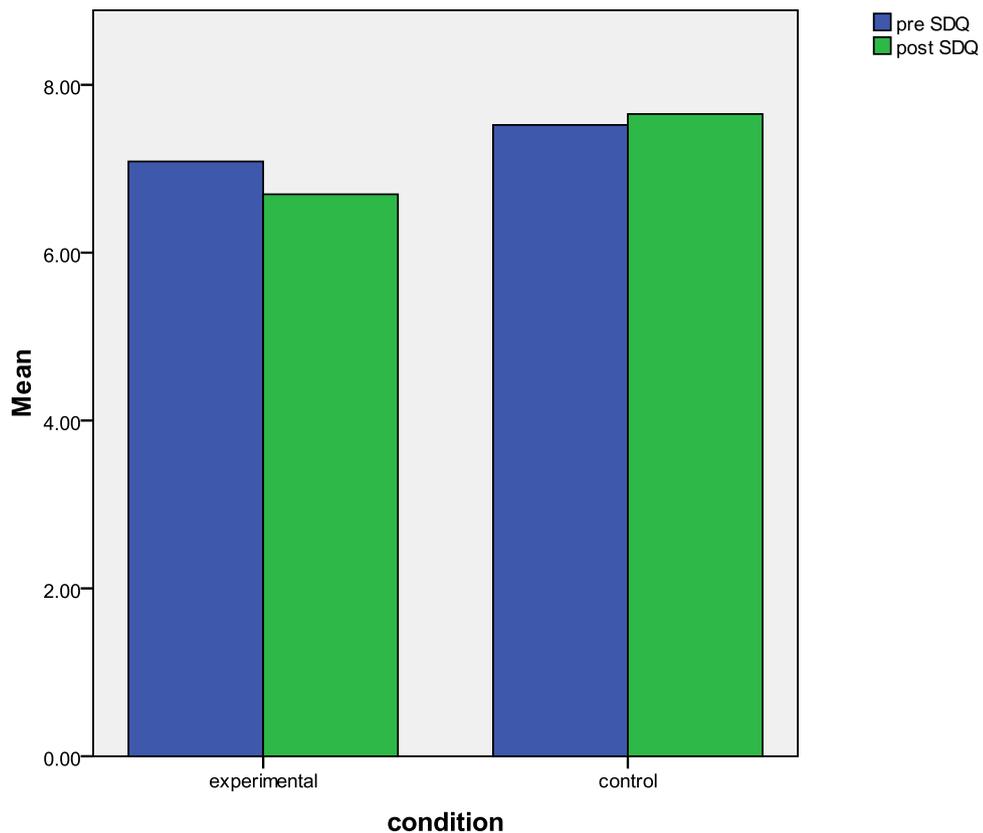


Figure 3j highlights the mean pre and post pro social behaviour scores for both the experimental (MI intervention) and control group.

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = .273$, $P = 0.604$. The interaction between condition and time was not statistically significant: $F(1,44) = 1.092$, $P = 0.302$.

In summary, analysis indicates that there is no significant difference in the mental well being scores on the pupil SDQ between participants in the Motivational Interviewing condition and the wait list control condition.

Therefore, the experimental hypothesis must be rejected and the null hypothesis accepted. That is, that there will be no significant difference in the mental well being scores on the pupil SDQ between participants in the Motivational Interviewing condition and the wait list control condition.

Let us turn now to explore the impact the MI intervention had on teacher perceptions of pupils' mental well being, as measured by Goodman's Strengths and Difficulties Questionnaire.

3.14 Analysis of Teacher Strengths and Difficulties Questionnaire

Figure 3k: A bar graph to show the mean pre and post total difficulties score on the teacher SDQ for the experimental and control group

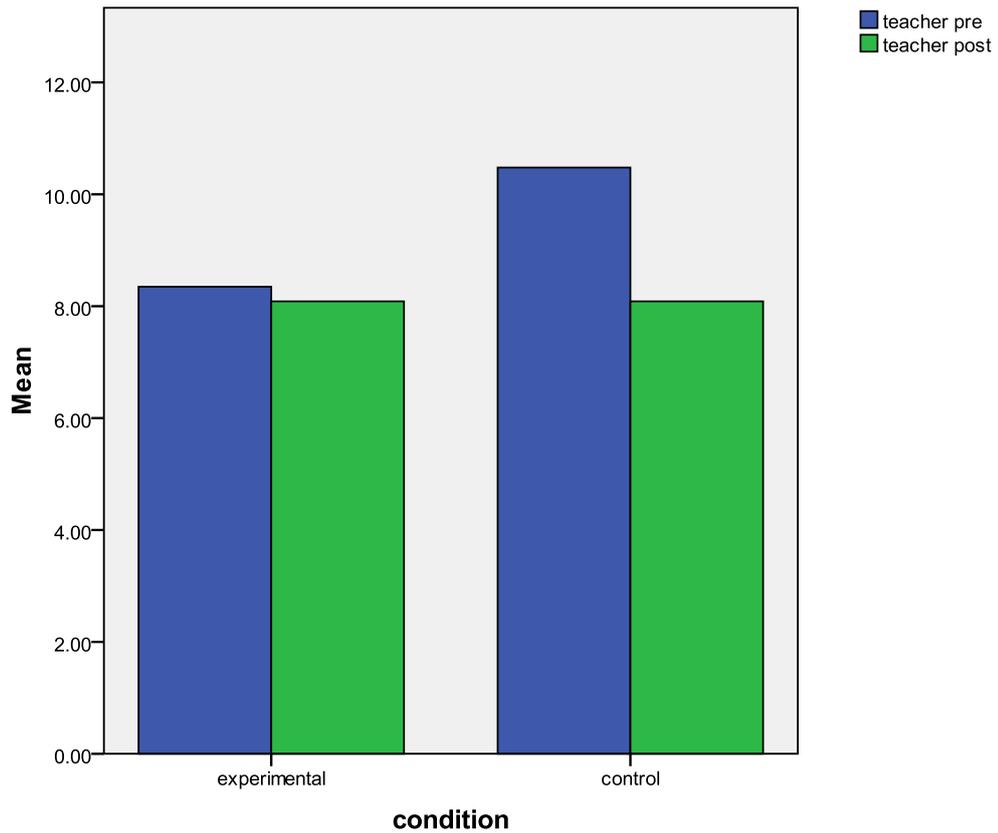


Figure 3k highlights the mean pre and post total difficulties scores for both the experimental (MI intervention) and control group. A decrease at post testing is positive.

Table 3f: A table to show the mean and SD pre and post total difficulties score on the teacher SDQ

	Pre		Post	
	Mean	SD	Mean	SD
Experimental	8.3	7.0	8.1	7.8
Control	10.5	6.6	8.1	6.8

It is evident from examining the mean scores that pupils in the experimental group demonstrate small improvements in their total difficulties score on the teacher SDQ from pre (M=8.3, SD=7.0) to post testing (M=8.1, SD=7.8). The control group also demonstrate an improvement from pre (M=10.5, SD=6.6) to post testing (M=8.1, SD=6.8).

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = 2.299, P = 0.137$. The interaction between condition and time was not statistically significant: $F(1,44) = 1.484, P = 0.230$.

Further analysis, including 2*2 mixed ANOVA's and independent and paired t tests, were then undertaken on the five domains of the teacher SDQ.

3.15 Analysis of Teachers' Perceptions of Peer Relationships

Figure 3I: A bar graph to show the mean pre and post peer relationships score on the teacher SDQ for the experimental and control group

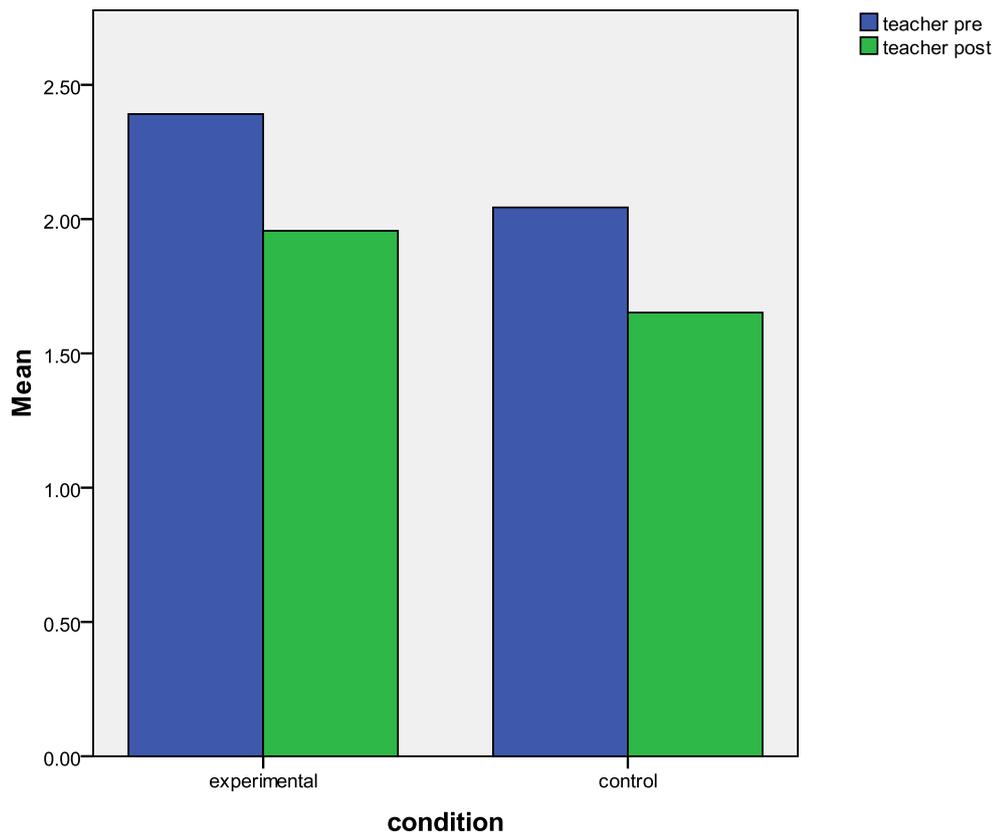


Figure 3I highlights the mean pre and post teacher perceptions of peer relationship scores for both the experimental (MI intervention) and control group. A decrease at post testing is positive as it indicates an improvement in teachers' perceptions of pupils' peer relationships.

From examining figure 3I above, it appears that both the experimental and the control group have improved at post testing.

A 2*2 mixed ANOVA was employed. The main effect of time was statistically significant: $F(1,44) = 4.256, P = 0.045$. The interaction between condition and time was not statistically significant: $F(1,44) = .012, P = 0.914$.

Paired T Test – Teacher Peer Relationships

The paired t test was used for within group comparisons. There was no significant difference between participants' pre and post scores in the experimental group: ($t = .1594, df = 22, P = 0.125$).

A paired t test also showed that the difference between participants' pre and post scores in the control group was not significant: ($t = 1.335, df = 22, P = 0.196$).

Independent T Test – Teacher Peer Relationships

The independent (unrelated) t test was used to compare group differences. There was no significant difference between the groups at pre testing: ($t = .534, df = 44, P = 0.596$). There was also no significant difference between the groups at post testing: ($t = .412, df = 44, P = 0.682$).

3.16 Analysis of Teachers' Perceptions of Emotional Distress

Figure 3m: A bar graph to show the mean pre and post emotional distress scores on the teacher SDQ for both the experimental and the control group

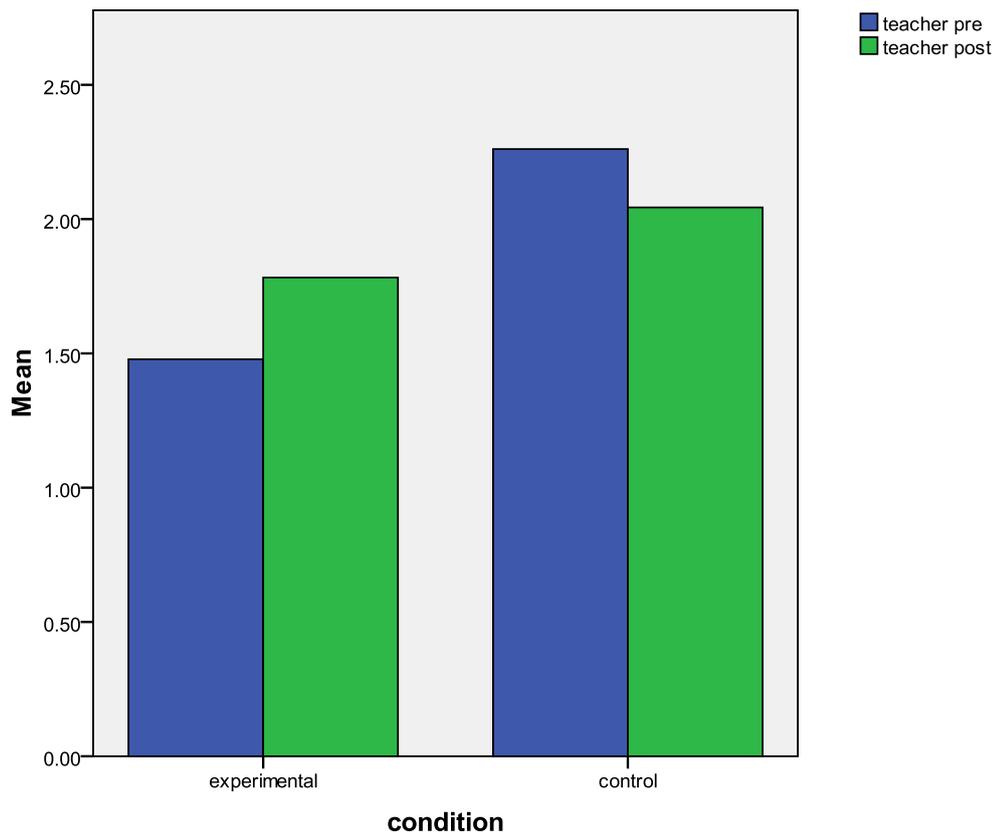


Figure 3m highlights the mean pre and post emotional distress scores on the teacher SDQ for both the experimental (MI intervention) and control group.

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = .021, P = 0.885$. The interaction between condition and time was not statistically significant: $F(1,44) = .762, P = 0.387$.

3.17 Analysis of Teachers' Perceptions of Behaviour Difficulties

Figure 3n: A bar graph to show the mean pre and post behaviour difficulties scores on the teacher SDQ for both the experimental and the control group

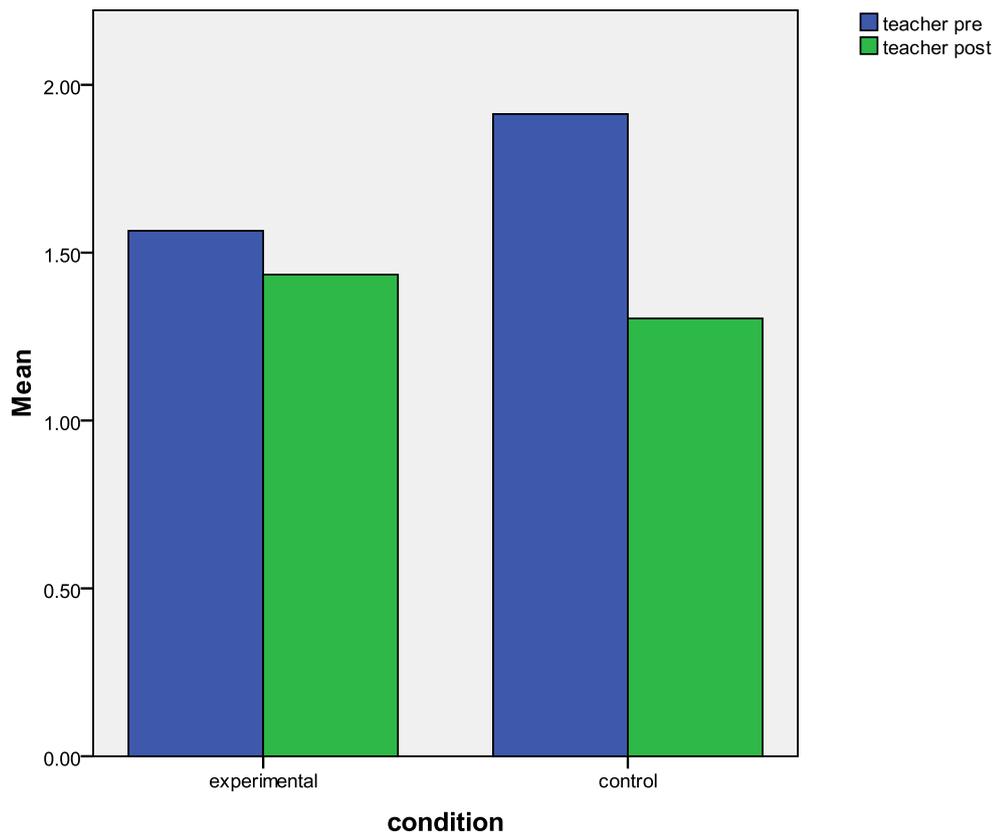


Figure 3n highlights the mean pre and post behaviour difficulties scores on the teacher SDQ for both the experimental (MI intervention) and control group. A decrease in the scores at post testing is positive.

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant $F(1,44) = 1.486, P = 0.229$. The interaction between condition and time was not statistically significant: $F(1,44) = .622, P = 0.435$.

3.18 Analysis of Teachers' Perceptions of Hyperactivity

Figure 3o: A bar graph to show the mean pre and post hyperactivity scores on the teacher SDQ for both the experimental and the control group

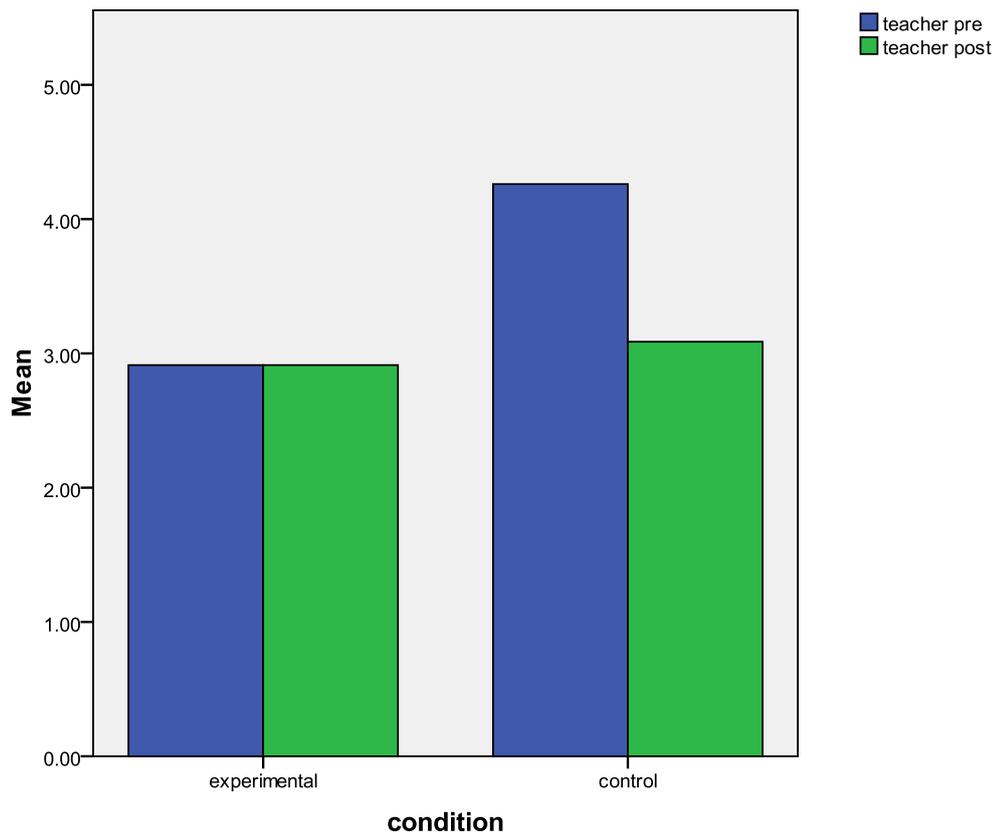


Figure 3o highlights the mean pre and post hyperactivity scores on the teacher SDQ for both the experimental (MI intervention) and control group.

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = 2.886, P = 0.098$. The interaction between condition and time was not statistically significant: $F(1,44) = .2886, P = 0.098$.

3.19 Analysis of Teachers' Perceptions of Pro Social Behaviour

Figure 3p: A bar graph to show the mean pre and post pro social behaviour scores on the teacher SDQ for both the experimental and the control group

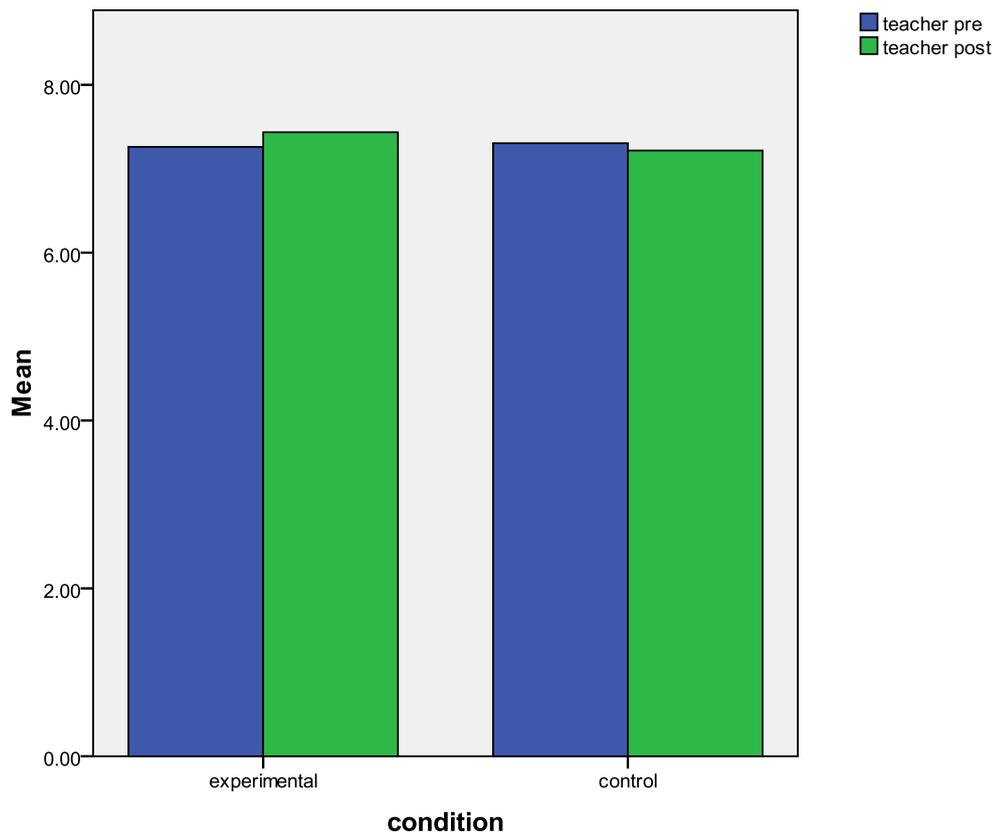


Figure 3p highlights the mean pre and post pro social behaviour scores on the teacher SDQ for both the experimental (MI intervention) and control group. An increase in the scores at post testing indicates an improvement in teacher perceptions of pupils' pro social behaviour.

It is evident from examining figure 3p above that teachers' perceptions of pupils' pro social behaviour have enhanced for the experimental group at post testing, but decreased slightly for the control group.

A 2*2 mixed ANOVA was employed. The main effect of time was not statistically significant: $F(1,44) = .010, P = 0.919$. The interaction between condition and time was not statistically significant: $F(1,44) = .094, P = 0.760$.

In summary, analysis indicates that there is no significant difference in the mental well being scores on the teacher SDQ between participants in the Motivational Interviewing condition and the wait list control condition.

Therefore the experimental hypothesis must be rejected and the null hypothesis accepted. That is, that there will be no significant difference in the mental well being scores on the teacher SDQ between participants in the Motivational Interviewing condition and the wait list control condition.

Let us turn now to Chapter Four, the discussion, where the researcher shall explore each hypothesis in turn and discuss it in relation to the current findings and previous literature in the field. Methodological issues will be revisited and implications for practice and future directions will be considered.

Chapter 4 - Discussion

This discussion will aim to explore the way in which the results reported above support the research objectives stated at the outset: namely, of whether a MI intervention can promote pupil resilience and self-esteem and if teacher and pupil perceptions of mental well being are enhanced following pupil involvement in a MI intervention.

The researcher formulated a number of hypotheses pertinent to the current study. This involved generating the null hypotheses, which will be accepted should the experimental hypotheses be rejected.

The researcher now intends to examine each hypothesis in turn in relation to the current findings. A discussion regarding the research questions, key conclusions, previous research in the field of literature, potential methodological issues and implications for future practice will follow.

4.1 Hypotheses

Hypothesis 1

Participants in the Motivational Interviewing condition will show significant increases in their resiliency scores on the resiliency scales in comparison to the wait list control condition.

Analysis highlighted that there was no significant difference between the conditions.

Descriptive analysis indicated that although both groups demonstrated improvements on the sense of mastery and sense of relatedness subscales, this was not statistically significant.

It is further evident from examining the descriptive statistics that pupils in the experimental group demonstrated improvements in their levels of emotional reactivity from pre to post testing, whereas the control group remained the same. However, again this was not a statistically significant finding. Therefore the experimental hypothesis must be rejected and the following null hypothesis accepted:-

Null Hypothesis

There will be no significant difference in the resiliency scores between participants in the Motivational Interviewing condition and the wait list control condition.

Hypothesis 2

Participants in the Motivational Interviewing condition will show significant increases in their self-esteem measured on Butler's Self Image Profile in comparison to the wait list control condition.

Descriptive and statistical analysis indicates that significant differences were apparent in the self-esteem scores of participants in the Motivational Interviewing condition, measured on Butler's Self Image Profile, in comparison to the wait list control condition. Therefore, the experimental hypothesis has been accepted.

Hypothesis 3

Participants in the Motivational Interviewing condition will demonstrate significant increases in their mental well being scores on the teacher SDQ in comparison to the participants in the wait list control condition.

Analysis highlighted that there was no statistically significant difference on any domains of the teacher SDQ. Although a main effect of time was

detected on the pupil peer relationships domain, this could not be allocated to either group.

Descriptive statistics indicate that improvements were apparent in teachers' perceptions of peer relationships, for both the experimental and control group, but this was not a statistically significant finding. Therefore the experimental hypothesis must be rejected and the following null hypothesis accepted:-

Null Hypothesis

There will be no significant difference in the mental well being scores on the teacher SDQ between participants in the Motivational Interviewing condition and the wait list control condition.

Hypothesis 4

Participants in the Motivational Interviewing condition will demonstrate significant increases in their mental well being scores on the pupil SDQ in comparison to the participants in the wait list control condition.

Analysis highlighted that there was no statistically significant difference on any domains of the pupil SDQ, therefore the experimental hypothesis must be rejected and the following null hypothesis accepted:-

Null Hypothesis

There will be no significant difference in the mental well being scores on the pupil SDQ between participants in the Motivational Interviewing condition and the wait list control condition.

Let us now revisit the research questions formulated in the current study and link these with the key findings.

4.2 Research Questions

How effective is a group-based motivational interviewing intervention in promoting pupil resilience and self-esteem?

Key questions to address in the research include:

Can a group-based motivational interviewing intervention promote Y8 pupils' resilience?

Although descriptive statistics indicate improvements in pupil resilience, this is not statistically significant, therefore suggesting that the motivational interviewing intervention has not significantly promoted pupils' resilience.

Can a group-based motivational interviewing intervention promote Y8 pupils' self-esteem?

Analysis suggests that participants in the motivational interviewing condition have improved significantly in their levels of self-esteem following the intervention as measured by Butler's Self Image Profile, in comparison to the control group, signifying that the intervention has promoted their self-esteem.

The researcher intends to devote some time later to discuss the potential issues that may often arise around the analysis and interpretation of data and the importance of reporting all of the findings, even those that appear to present contradictions.

Are teachers' views of their pupils' mental well being enhanced following pupil involvement in a five week motivational interviewing intervention?

The findings suggest that teachers' views of pupils' mental well being is not enhanced significantly, following pupil involvement in the motivational interviewing intervention.

Are Y8 pupils' views of their mental well being enhanced following their involvement in a five week motivational interviewing intervention?

The findings suggest that pupils' mental well being is not enhanced significantly, following pupil involvement in the motivational interviewing intervention.

4.3 Discussion of Key Findings

MI and Self-Esteem

A key goal of MI is to promote individuals' self-esteem (Miller and Rollnick 2002). In the current study, pupils in the experimental group have increased in their levels of self-esteem considerably, following the implementation of the MI intervention. Pupils further demonstrated movements through the stages of the wheel of change, which theorists would predict, as their self-esteem develops, and pupils begin to tackle issues with a feeling of empowerment and success (McNamara 2009). MI aims to facilitate client motivation by focusing on the positives and moving away from the risk of negative feedback. Pupils need to believe that change is achievable and demonstrate persistence and commitment whilst engaging in the process of change.

As discussed in the literature review, only a handful of studies in the field of MI have focused on its impact in education and more research is clearly needed. Its successes in the field of health and addictive behaviour are well documented (Gray, McCambridge and Strang 2005). More recently, some researchers have suggested that a MI approach may have a positive influence upon pupil motivation in educational settings, particularly promoting pupil attendance, achievement and self-concept (Atkinson and Woods 2003). The current findings further suggest that a group based MI intervention in schools can positively influence pupil self-esteem too.

Research into group based MI has indicated that difficulties may arise if individuals are all at various stages on the wheel of change (Miller and Rollnick 2002). In the current study, although the pupils were not all at the same stage this did not appear to create any complications. In fact, the researcher felt that it promoted more discussion around commitment and motivation to change. However, this may have been more problematic had some of the individuals regarded themselves as pre-contemplators (Miller and Rollnick 2002).

MI and Resilience

Research at the psychological level, suggests that developing a sense of mastery and self-efficacy is reliably associated with resilience (Cowen et al 1997). A key goal of motivational interviewing is to promote self-efficacy. However, a statistically significant finding was not apparent on the resiliency measure, indicating that in the current study, the MI intervention had little effect on promoting pupils' resilience.

Recent research indicates that there seems to be no real *clear* definition of resilience and these conceptualisations appear to have varied over time amongst studies. (Schoon and Bartley 2008). This creates potential difficulties for practitioners when attempting to define and measure resilience and Luther, Cicchetti and Becker (2000) outlined three main challenges in

applying the construct of resiliency. These include 'differences in the definitions and measurements of resilience, discrepancies in applying the term resilience to individual traits as opposed to a changing process, and a lack of consistency in the use of the terms protective and vulnerability factors' (Luther, Cicchetti and Becker 2000, p.71).

Theorists advocate the importance of considering a number of factors when planning interventions to support pupil resiliency. It is not enough to simply consider change within the individual, but one has to consider other factors, including the impact of their environment. Fonagy et al (1994) regards **Within-child factors** e.g. having a positive self-perception and high cognitive ability, **Within home factors** e.g. secure relationships and socio economic status and **Outside-home factors** e.g. influence of neighbourhood and community, as key areas underpinning resiliency.

As the researcher was unable to change within home and outside home factors for the pupils taking part in the intervention, one has to therefore reflect that a significant finding may have been an unrealistic expectation. Studies focusing not only on promoting pupil resilience, but supporting parents in developing a resiliency mindset and adjusting the family context to support this, has been suggested to be much more effectual (Brookes and Goldstein 2001, Adi et al 2007). Doll et al (2004) further regard the creation of 'resilient classrooms' as crucial in promoting and fostering pupil resilience.

'An assessment of the role played by contextual factors in the onset of the child's problem may lead to the conclusion that altering these through working with parents and school staff is the most effective way to bring about long-term change for the child' (Heyne et al 2002, p. 687). Although the current study did try and encourage parental involvement through the completion of the SDQ's, this was unsuccessful due to a very poor return rate and therefore the implementation of the study appears to have had little impact on the pupils' surroundings. This is something the researcher intends to discuss further when considering future considerations and directions.

Much of the research into resilience is closely associated within the field of emotional literacy. Studies have demonstrated increasing amounts of evidence into the effectiveness of such interventions in promoting pupil resilience and mental health (Nemec and Roffey 2005). Many of these interventions are based upon the core principles of cognitive behavioural therapy (CBT), which involves changing individuals' thoughts and behaviour. Although similarities between the two approaches are apparent, MI differs from CBT with regard to who effects change. In CBT, the therapist advocates change, whereas in MI, the therapist's role is to help the client to explore and facilitate change themselves through enhancing motivation (Westra and Dozois 2006).

Upon reflection, it could be argued that a MI approach may not have been the most suitable intervention to promote pupil resilience and mental well being. Other interventions that place a larger emphasis upon developing individual skills and competencies in the area of emotional literacy appear to be more effective. Particularly as the process of MI involves a lot of reflection and insight into the self, having a firm foundation of those basic skills in emotional literacy would perhaps be more beneficial for individuals before taking part in the intervention (Kittles and Atkinson 2009). However, in the light of the exploratory evidence available at the time of planning this investigation, there was evidence to suggest that these were the domains of development potentially targeted by MI.

The researcher also thinks that it is important to consider whether a change in pupil resilience would be observed over such a short period of time. As the current study ran for five weeks, it could be suggested that this may not have been enough time for such changes to be seen.

As described in the literature review chapter, Gilligan (2001) reported a link between increased resiliency and higher levels of self-esteem. In the current study although participants demonstrated a significant increase in their levels of self-esteem, a significant finding of increased resilience was not apparent on any of the sub measures. This appears to suggest that resilience and self-

esteem may not always be closely correlated. However, further studies around the literature exploring the relationship between resilience and self-esteem need to be examined.

MI and Mental Health Promotion

As discussed in the literature review, research highlights the importance of implementing effective interventions in schools to promote pupil mental health and well being. MI aims to increase knowledge and concern, promote self-efficacy, internal attribution and self-esteem (McNamara 2009). Literature also indicates that it may be an appropriate intervention to enhance pupil resilience, by encouraging children and young people to adopt positive motivational styles. It is set apart from many other change-promotion interventions because it does not simply assume that everyone is ready to accept change. The researcher believes that MI may therefore be a suitable intervention that could be implemented in schools as part of a holistic approach in mental health promotion.

MI and Self-Efficacy

Bandura (1997) suggested that 'although self-esteem and self-efficacy can be related to some degree, there does not appear to be a precise relationship between them. For example, it is quite possible for a student to believe that she can effectively craft an essay in English class and also to possess negative perceptions of herself as a person.' (Bandura 1997, p.158). Similarly in the current study, on the mastery sub test of the resiliency scales measure, a pupil may have rated themselves as very high on 'I am good at fixing things' yet very low on how 'kind' they think they are. Hence, some pupils may perceive themselves as having low self esteem and be very resilient and vice versa.

4.4 Face and Construct Validity

Such issues occurring with the employment of these measures to assess the above constructs need to be further addressed in relation to face and construct validity. *Construct validity* addresses the presumed source and its effect on the outcome. Particularly when exploring whether the measure has assessed what it intended to. As discussed earlier, resilience appears to be a difficult concept to define, which could potentially then create issues around construct validity, making it increasingly complex for researchers to accurately measure pupil resilience (Luther, Cicchetti and Becker 2000). Determining construct validity is not as straightforward as some may think and consequently some practitioners may look for what seems reasonable. This is often referred to as *face validity* as it simply questions whether the measure *appears* to assess the construct of interest (Robson 2002 and Kazdin 2003).

4.5 Methodological Issues

As described in detail in the methodology chapter, the researcher employed a randomised control trial in the current study, as it is more likely to ensure validity and generalisability within a post-positivist design seeking to attempt explanations of cause and effect. However, real world research can create a number of challenges and it is important to consider the potential limitations with regards to any methodological issues and threats to validity that may have impacted upon the findings.

The researcher now intends to revisit and discuss some key issues with regard to the current design methodology. This will include reference to history and maturation, treatment drift, diffusion of treatment, testing, fidelity of implementation and experimenter expectancy effects as these are regarded by the researcher as important methodological issues that warrant further exploration and discussion.

History and Maturation

Statistical analysis indicates that the peer relationships domain of the teacher SDQ displayed an effect of time. However, further analysis suggested that this could not be located to either condition. *Maturation* within research methodology describes how processes within the subjects may create potential threats to internal validity as participants further mature over time as they become older, stronger, more tired or uninterested (Kazdin 2003). The effect of time detected may therefore have been due to the participants maturing and developing during the intervention period.

History refers to events that happen during the intervention. Therefore, one must consider external variables, such as the pupils' personal experiences during this time and how they may have potentially influenced the outcome of the study. Two of the intervention groups also ran closely to the summer holidays and this is another factor that may have influenced the findings.

It is important to note that the school underwent an Ofsted inspection during the implementation of the study and was issued with a notice to improve. It is therefore necessary to consider the *possible* impact of this upon the outcomes of the study as theoretical accounts suggest that external pressures and/or negative staff cultures may impact upon individual engagement (Miller 2003). Cuckle and Broadhead (1999) further reported how the pressures of Ofsted can influence staff morale, potentially creating high levels of stress and ill health. As the school were under a significant amount of pressure during the period that the intervention took place, teachers may have been less enthusiastic and positive about completing the SDQ questionnaires. Furthermore, as the measures were exploring self esteem, resilience and mental well being, it should be considered that the demands of Ofsted could have impacted on pupil and teacher spirits at a systemic level, ultimately influencing school mood and responses.

Part way through the intervention, the room location was also changed, as the school required this for other purposes, therefore the weekly routine was disrupted and participants had to make their way to another area of the

school. The room was also in a busier part of the school. Therefore, such changes may have unsettled the pupils and influenced their disposition and levels of concentration, potentially affecting the outcomes of the study.

Treatment Drift

The current study ran for a five week period and it took a lot longer than this for many of the post questionnaires to be returned to the researcher. The final post data questionnaires did not actually arrive until the end of February/ beginning of March.

Two of the groups also ran prior to the summer holidays, and as some of the children had been away when the post data was collected, the researcher did not receive the questionnaires until after the summer holidays. Therefore, it is important to consider this issue of *treatment drift* and how it may have impacted upon the findings.

Diffusion of Treatment

The control group and the experimental group reside in the same school and were together for the duration of the intervention. The researcher was only in school during the MI sessions, so had limited contact with participants. However, the Pastoral Support Leader remained in the school for the majority of the time and the researcher cannot be sure if she had discussed the intervention at any other time with either of the groups.

The Pastoral Support Leader did report however, that several members of the control group were asking when they were going to receive the intervention, as they had heard it was 'good'. It must be therefore be acknowledged that this desire to take part in the intervention could potentially then have affected the control groups responses on the post questionnaires.

Testing

As the current study was a pre to post test design, one must acknowledge the issue of testing and practice effects. *Testing* describes how participant familiarity with the measures may influence their performance at post testing. 'Merely repeating the assessments without an intervention, can significantly improve measures' (Kazdin 2003, p. 26). With regard to the current study, in some cases descriptive statistics indicated that both the experimental and the control group demonstrated increases from pre to post testing, although this was not a statistically significant finding. This issue of testing must therefore be acknowledged as a potential threat to the validity of the research design.

Fidelity of Implementation

The researcher administered all of the pre and post measures to the majority of the experimental group, whereas the Pastoral Support Leader administered the measures to the control group. Although the researcher provided the support leader with a script to follow, to ensure both groups were given the same instructions prior to completing the questionnaires, as the researcher was not present during administration, one cannot be sure that this was strictly adhered too. The Pastoral Support Leader was also involved in handing out and collecting the teacher SDQ's, pre and post intervention and several of these were not returned to the researcher for a considerable period of time post intervention.

When considering treatment fidelity in terms of a MI approach, one must think about the concept as something that may potentially create different interpretations by researchers. In the current study the researcher therefore chose to use the 'Facilitating Change' programme (Atkinson 2005). This is currently the only published structured MI intervention programme available for use in schools and it is intended to be applied with individuals. Many practitioners may decide however to adopt the theory and principles of MI in

their work, without following a well-structured programme such as this. Consequently, questions could arise around individual construal. In addressing treatment validity, it was for this reason that the researcher chose to utilise Atkinson's programme, as it is based upon the four key principles of MI (Atkinson 2005) which the researcher regards of key importance.

Experimenter Expectancy Effects

The researcher delivered all of the sessions of the MI intervention and must therefore acknowledge the issue of *experimenter effects* as a potential source of bias. Design literature describes how the researcher's beliefs and anticipated outcome of their investigation may in some way unintentionally influence participants' performance. However, research into the impact of this suggests that 'the pervasiveness of this influence among different areas of research is not known (and) how experimenter expectancies exert their influence is unclear' (Kazdin 2003, p.88).

4.6 Potential Issues with the Measures Employed

Three measures were utilised in the current study, pre and post the MI intervention. These were the Resiliency Scales for Children and Adolescents (Prince-Embury 2007), The Self Image Profiles (Butler 2001) and The Strengths and Difficulties Questionnaire (Goodman 1997). The researcher now intends to explore any potential issues regarding the measures used in the present design. Particularly, concerns regarding self-report measures, number of response options and the validity and reliability of the measures used will be discussed further.

Self-report measures are considered by many researchers to be a highly effective method when surveying children's attitudes and behaviour (Borgers, Hox and Sikkell 2004). However, more recent evidence suggests that a number of factors such as respondent characteristics and question difficulty may influence pupils' responses (Borgers, Hox and Sikkell 2004). A growing

body of evidence appears to imply that the respondent's cognitive abilities and a variation in the wording of some questions can ultimately affect their responses on self-report questionnaires (Schwarz et al 1998).

Borgers, Hox and Sikkel (2004) reported that a lot of the research in this area tends to focus on adults, hence they devised a study with children and young adolescents. They explored the effect of negatively formulated questions, the amount of response options and the choice of a neutral midpoint on the reliability of participant response. The findings of this study suggested that negatively formulated questions had no significant impact, although they did report a difference between participants' responses on positively and negatively worded questions. Borgers et al (2004) further reported that as the amount of response options on the scale increased, up to six, so did the stability of the participants' responses. The Self Image Profiles (Butler 2001) measure in the current study also offers six options, therefore Borgers et al would suggest that this may have improved the overall quality of responses.

Other factors to consider include the reality that all children are diverse and may have different interpretations of what the questions mean to them. A respondent's characteristics i.e. their levels of motivation, need for social desirability, personality and knowledge could therefore create potential disadvantages with the use of surveys and questionnaires (Robson 2002). Furthermore, 'In addition to the problem of negations, limitations of comprehension and verbal memory are expected to be one of the most important causes of children's difficulties in adequately responding to survey questions' (Borgers, Hox and Sikkel 2004, p.20).

Longer questions on self-report surveys have also been argued to reduce the amount of response reliability due to an increased demand on verbal memory (Borgers and Hox 2000, Holaday and Turner-Henson 1989). Borgers et al (2004) thus conclude that survey questions should be short and clear. Raaijmakers et al (2000) also reported that self-report surveys that tend to offer neutral midpoints often tempt participants to select that response, particularly when they are undecided over which option to choose.

With regard to the current study, the Self Image Profiles (Butler 2001) provide simple statements and offer six point response options for participants to choose from. The SDQ (Goodman 1997) offer three response options and the Resiliency Scales (Prince-Embury 2007) offer five. Upon reflection, it could be suggested that as some of the self-report statements on the Resiliency Scales and the SDQ are rather complex and lengthy, a lack of understanding and/or the amount of information offered, could ultimately have affected pupils' responses. Reflecting upon Raaijmakers et al's (2000) findings, the researcher must also consider that participants in the current study may have simply selected the neutral midpoint, if they were unsure which option to choose and this would inevitably have had an impact upon the findings.

The SDQ asks participants and teachers to rate the pupils' behaviour over the past six months. As the intervention only ran for a five week period, it is difficult to know whether the SDQ's were filled in on the basis of the intervention. It could be suggested that with regard to the current design and the time constraints placed upon the researcher, there was not a long enough period allocated for any changes to be observed. A follow up phase would have been more suitable.

A recent review into the convergent and discriminant validity of the SDQ was conducted by Hill and Hughes (2007). They revealed that the measure had good convergent validity but relatively poor discriminant validity. Hill and Hughes (2007) reported that the SDQ does not discriminate well among the constructs of emotional symptoms, conduct problems, hyperactivity, pro social behaviours and peer relationships. They suggested that the SDQ is not suitable as a diagnostic measure or to assign participants into different treatment measures, but may be useful as a screening assessment measure.

Van Roy, Veenstra and Clench-Aas (2008) further revealed that future considerations regarding the improvement of internal reliability and conceptual clarity of the SDQ must be acknowledged as their results

particularly indicated an unclear construct and meaning of the pro social behaviour domain. As a non significant finding was apparent on various domains of the SDQ in the current study, such limitations must be acknowledged by practitioners who are considering its use in future studies.

The return rate for the parent version of the SDQ was very poor and therefore the researcher was unable to use this data during analysis. Some practitioners suggest that a low response rate may be due to individuals' perceptions that the questionnaire is somewhat intrusive and negative (Fantuzzo, McWayne and Bulotsky 2003). The length of the questionnaire may also affect response rates, with longer questionnaires being less likely to be returned (Edwards et al 2002). Other factors that may have contributed to the poor return rate in the current study might have been down to difficulties for some parents/carers in accessing and comprehending various questions.

Interestingly, although it is generally agreed that a high number of response options on self-report questionnaires can affect the reliability of children's choices (Borgers and Hox 2000), where adults are concerned, a vast amount of research indicates that the more response options they are given, the better the quality of their responses (Krosnick and Fabrigar 1997). As the teacher and parent SDQ only offers three response options:- not true, somewhat true and certainly true, evidence would suggest that the quality of adult responses may not have been as reliable as those questionnaires offering more categories.

The Resiliency Scale (Prince Embury 2007) is a relatively new measure and there is currently a lack of evidence supporting its effectiveness, so more research supporting its reliability is required. Jackson, Whitehead and Wigford (2010) recently employed the measure to assess the resilience of looked after children and reported that they displayed lower levels of resilience than non looked after children. However, they exercised caution and advocated that the scales only provide a snapshot of the pupils' level of resilience at that time. Furthermore, 'it should be noted that although the

resiliency scales have been used (in this study), there are a number of limitations related to the reduction of complex interactions into single factors. The scales may be useful for initial screening, but it is likely that reliability could be increased if they are used over time' (Jackson, Whitehead and Wigford 2010, p.74).

More recently, a number of other measures of children's mental health and psychological well being have been edited by Frederickson, Dunsmuir and Baxter (2009), including six measures specifically assessing pupil resilience. These scales have been selected in the area of resilience with regard to a child's coping strategies and their sense of mastery and self-efficacy (McCrory and Cameron 2009). Unfortunately, these scales were unavailable to the researcher at the time the measures were selected for the current investigation, but it would be useful to examine these in more detail and consider their use in future intervention studies aimed at promoting pupil resilience.

4.7 Analysis and Interpretation

With regard to the statistical analysis of the self-esteem measure in the current study, the researcher reported mixed findings. Descriptive statistics, gain score analysis and independent and paired t tests indicate that the intervention had a significant effect on the experimental group's self-esteem scores as measured by Butler's Self Image Profile, in comparison to the wait list control.

However, due to the fact that there was a significant difference between the two groups at pre testing, purely by chance, even though random allocation *had* taken place, the researcher further decided to employ an ANCOVA. The ANCOVA converts the design from mixed to a single factor design, reduces error variance and makes use of the difference in pre test scores between groups by adjusting the post test scores (Gliner et al 2003).

In the current study, the ANCOVA then suggested that there was no significant difference between the groups. However, 'It should be noted that gain scores, instead of post test scores, could be adjusted using ANCOVA. The rationale behind this approach is that there are usually pre test differences between the treatment and control groups prior to the intervention, thus the ANCOVA approach would adjust a group's post test scores downwards, based on the linear regression between pre test and post test scores' (Gliner, Morgan and Harmon 2003, p. 502). The researcher therefore believes that as there was a significant difference at pre testing between the two groups, the ANCOVA *may* have adjusted the experimental group's scores downwards and therefore then produced a non-significant finding.

Gain score analysis did indicate a significant difference in the groups' self-esteem scores. Due to the fact that there were baseline differences, the researcher then intended to adjust the gain scores using ANCOVA as suggested by Gliner, Morgan and Harmon (2003), to examine if this would in fact produce a significant result. Unfortunately, this data set did not meet the requirements for employing an ANCOVA, so further analysis could therefore not be undertaken using this approach.

Interestingly, previous research has suggested that different analyses on the same data set can produce varying results (Wright 2003). This issue often arises in research when random allocation is not feasible and the groups are therefore considered non-equivalent. 'If random allocation is used this is not problematic because the groups' initial scores should not differ systematically' (Wright 2003, p. 663). However, although random allocation took place in the current study, unfortunately on the self-esteem variable, there appeared to be a significant difference between the two groups at pre testing, with participants in the experimental group demonstrating lower self-esteem scores than the control group.

Searle and Hudson (1982) compared the ANCOVA measures from ten computer programmes and reported that SPSS's ANCOVA procedure is the

most unconventional out of four of the programmes and how the packages may produce different ANCOVA results. Owen and Froman (1998) further described the issue of measurement error in the covariate when employing an ANCOVA and how this could create a bias in the adjusted means.

Lord's (1976) paradox describes how dissimilar tests can lead to diverse results and he discussed this challenge with regards to both the t test and the ANCOVA. This is an issue that is pertinent to the current study, as the researcher has reported similar findings. Lord depicts how 'both approaches are valid descriptions of the data and they address very similar research questions, thus the apparent paradox' (Wright 2003, p. 664) However, it is important to acknowledge that the questions they address *are* different (Hand 1994). The t test is asking whether the average gain in score is different for the two groups. The ANCOVA is asking whether the average gain, when partialling out pre test scores, is different between the two groups.

Maxwell and Delaney (2004) further suggest that it really depends on what the researcher is looking for and the question they want to answer. They advise that if applied researchers are examining whether each group has demonstrated an increase in scores, analysing the differences using t tests may be more beneficial than an ANCOVA. 'The t test is further preferred when the interest is more in the amount of gain in either of the conditions, rather than explicitly on comparing why there may be differences between the effects' (Wright 2003, p.675).

Maxwell, Delaney and Wright's ideas resonate well with the aims of the current study, as the researcher was examining whether there had been a significant increase in the experimental group's self esteem, in comparison to the wait list control groups. It was partly for the reasons discussed above that the researcher therefore chose to accept the experimental hypothesis and reject the null hypothesis.

However, the researcher felt that it was important to report both sets of the results. After all, 'statistics are about discovering and communicating

patterns in the data, not restricting your search to some specific hypothesis' (Wright 2003, p.675). It is also important to interpret any results with caution. Hence, although the researcher has chosen to accept the experimental hypothesis, further research to support or refute this finding is clearly needed.

4.8 Real World Enquiry

Although the researcher's ontological position in real world enquiry, as described in the methodology chapter, falls within the post-positivist paradigm, upon reflection, a more critical realist perspective (Tilley 2000) may be appropriate. In critical realism, realistic evaluation considers: 'Whereas the question which was asked in traditional experimentation was, "Does this work?" or "What works?", the question asked by us in *realistic evaluation* is "What works for whom in what circumstances?" Thus, we begin by expecting measures to vary in their impact depending on the conditions in which they are introduced' (Tilley 2000: p. 4).

If more time had been permitted the researcher would have liked to have gathered further data through employing some qualitative data methods, such as focus groups and/or interviews to collect further information regarding the process of the study. As discussed earlier, construct validity is a difficult concept to determine and the use of multiple methods in the gathering of data could *perhaps* enhance confidence in the study's validity (Robson 2002). However, the researcher still considers the post-positivist epistemological standpoint as an important perspective in research methodology in the fact that it helps practitioners to delineate cause and effect relationships between variables.

Research design literature reports how a mixed methods approach may be appropriate in some cases, incorporating both quantitative and qualitative methods, and this is often referred to as the pragmatic paradigm (Mertens 2009) Some researchers advocate the importance and usefulness of applying both quantitative and qualitative approaches in research and

suggest that this mixed methods approach does not need to replace either paradigm, but could be considered as a third concept that 'can also help bridge the schism' between the two approaches (Onwuegbuzie and Leech 2004, p.15).

Recent theorists, whilst still acknowledging that there are clear differences between the two concepts, advocate that there are also a number of similarities that are often unobserved. 'Both methodologies describe their data, construct explanatory arguments from their data, and speculate about why the outcomes they observed happened as they did' (Sechrest and Sidani (1995, p.78). It is argued that disparities in epistemological thinking should not prevent researchers from considering or using other methods and that practitioners should strive to complement one method alongside another.

Johnson and Onwuegbuzie (2004) further suggest that a mixed methods approach means that researchers are not constrained to just one process of investigation and are thus actively exploring and considering various approaches in answering their research questions. Qualitative interviews may be added to experimental research and would further gather more rich information, exploring individuals' perspectives. This could then be considered alongside the experimental findings, providing a deeper insight into the processes and journey of those involved. This third paradigm is an important one that often appears to be overlooked by many research practitioners and 'it is now time that all researchers and research methodologies formally recognise and begin systematically writing about it and using it' (Johnson and Onwuegbuzie 2004, p.22).

4.9 Summary of Findings

In summary, this study has demonstrated the positive impact a group based MI intervention may have on promoting pupil self-esteem. The lack of evidence indicating its effect upon pupil resilience and teacher and pupil

views of mental well being has also been discussed. The findings contribute to a small, but growing, evidence base exploring the use of MI in educational settings. Methodological considerations, potential issues with the measures employed and the challenges associated with analysis and interpretation have all been given due consideration. Discussions regarding the difficulties associated with pursuing real world enquiry and the various epistemological perspectives that may underpin the research design have further been explored and critiqued.

4.10 Future Directions

The present study offers an original contribution in the field of educational research as it is the first randomised control trial design exploring the effectiveness of a MI intervention, based in schools. As discussed in the literature review, research further suggests the need for more interventions in the area of self-esteem and mental well being targeting the secondary age phase, hence the researcher's decision to implement an intervention for this group (Adi et al 2007).

Miller and Rollnick's more recent definition of MI can be described as 'a collaborative, person-centred form of guiding to elicit and strengthen motivation for change' (Mcnamara 2009, p.210). They have expressed concerns that more recent work and interpretations have moved away from their understanding of the concept. MI is now perceived by some as 'motivational dialogues and/or conversations', which can create difficulties and mismatches between individuals as to what actually constitutes MI (Mcnamara 2009). Therefore, future investigations should ensure that the concept of MI that is being adopted by the researcher is made explicit.

Theorists stress the need for more information regarding how and why MI works as data is seriously lacking in this domain (Miller and Rollnick 2002). Vansteenkiste and Sheldon (2006) advocate the importance of considering

the self-determination theory (SDT) alongside motivational interviewing and suggest an integration of the two ideas as a way of understanding why MI works and how it is successful in practice. It is suggested that the SDT can help to clarify the concept of MI for practitioners by differentiating the concept of motivation. SDT puts forward four types of extrinsic motivation 'which reflect the degree to which socially valued tasks with little intrinsic appeal have been internalised or taken' (Vansteenkiste and Sheldon 2006, p.68).

Some theorists would therefore argue with aspects of Miller and Rollnick's explanation of MI and suggest a conceptual shift. They argue that it is not about enhancing individuals' intrinsic motivation for change, but that it promotes the internalisation of extrinsic change intentions (Martino, Carroll, Kostas, Perkins and Rousanville 2002). 'By enhancing their sense of identification with the change intention, and by integrating that intention with the rest of their value-system, clients come to perform the activity with a sense of self-endorsement rather than with a sense of resistance and pressure' (Vansteenkiste and Sheldon 2006, p.69).

MI is described as possessing four key components (Miller and Rollnick 2002). SDT is further suggested to clarify how MI works and indicates that it produces successful outcomes because of the promotion of three needs that have been put forward by SDT. These encompass the four components originally recommended by Miller and Rollnick (2002). Client need-satisfaction includes autonomy, competence and relatedness. The relatedness aspect of SDT complements MI's concept of being empathetic, autonomy resonates with MI's principle of rolling with resistance and SDT's notion of competence links with MI's goal of promoting an individual's self-efficacy (Vansteenkiste and Sheldon 2006).

Eliciting arguments to promote change is another key aspect of MI and SDT theorists support this by advocating the need to support the development of autonomy. Through applying these principles, it is suggested that this will ultimately lead to more desired outcomes, through satisfying needs and providing an insight into how such changes may occur. It seems that further

research and exploration around this integration of MI and SDT may be extremely beneficial to practitioners, providing a more clear understanding of how and why MI can be a highly effectual process (Vansteenkiste and Sheldon 2006).

Real world research is challenging and as the researcher has discovered in the current study, it is extremely difficult to control everything. Unforeseen circumstances, such as the arrival of Ofsted and a disruption in room location, can have an impact upon the context in which the study takes place. Time constraints placed upon the researcher in the current study also meant that a follow up period was not feasible. When measuring concepts such as resilience and self-esteem, future studies should perhaps consider that more time may be needed to see any potential changes and further monitor the long term effects of the intervention.

Future considerations should further include employing studies across a range of educational contexts. The current study was employed in a secondary school, but studies examining the impact of MI with other vulnerable groups, such as school refusers and excluded pupils, could also contribute a meticulous evidence base (Kittles and Atkinson 2009). The possibility of adapting and breaking down the demands of some of the complex language used in MI interventions would also mean that it may then be more suitable for use in primary settings. This is something that the researcher would consider more meticulously when undertaking future research in the field of MI, as this also arose as a potential issue with some of the children involved in the current study. A further area of interest could involve exploring MI and gender differences. As discussed in the literature review, research exploring whether gender differences influence pupils' levels of resilience, self-esteem and motivation reports mixed findings. It would therefore be interesting to compare the impact of a MI intervention on both male and female's levels of resilience and self-esteem to investigate whether there are in fact any significant differences.

Parental involvement and support is extremely important when delivering interventions. It is imperative to consider the implications of this as often questionnaires and surveys may not be the most appropriate way to gather their views. As discovered in the current study, the return rates were poor. The researcher's reflections with regard to the practical lessons learnt include the importance of involving parents in the process early on and thinking about ways to actively encourage and sustain their support throughout. More recent literature has started to consider the use of MI with parents/carers to encourage collaboration and empowerment (Wood and Rice 2009). This is an interesting idea that warrants further exploration as through engaging parents in the process of MI, this may be an effective strategy to sustain their involvement.

4.11 Overall Summary

In summary, the current study has offered an original contribution, exploring the value of an MI intervention in promoting pupil self-esteem and resilience. Theory and research into the process of MI has continually developed over the years and future investigations should continue to explore the significance of MI interventions when applied across educational settings with children and young people.

Chapter 5- Conclusion

The present study is a randomised control trial, exploring the effectiveness of a group based MI intervention, in promoting pupil resilience and self-esteem. The findings suggest that pupil self-esteem may significantly increase following their involvement in a MI intervention, but no significant impact upon pupil resilience or teacher and pupils' views of pupil mental well being was detected. The absence of an effect in these domains may be accounted for by potential issues with the measures employed, challenges associated with the definitions of the constructs being measured, a lack of parental and school support, and prospective threats to the validity of the investigation.

As the study was conducted in only one secondary school, further research on a larger scale is necessary to support or refute the researcher's current findings, particularly as unforeseen circumstances occurred, such as the arrival of Ofsted, leading to a lack of support from the school and a disruption in routines during the implementation of the intervention study. As discussed above, theoretical accounts would suggest that this impact of external pressures may potentially influence pupil engagement (Miller 2003).

Implications for practice and future directions for research include the importance of acquiring parental and school support when delivering interventions such as this, as evidence advocates the positive impact this can have upon pupil development (Heyne et al 2002). The researcher further advocates the need to critique and adequately explore the measures that are to be used, to ensure that they are suitable for the design of the study. Self-report questionnaires are often used by practitioners in research studies with children and young people, but issues around the number of response options and length and content of questions should be of key concern.

As discussed earlier, resilience is an extremely difficult concept to measure, as there appears to be no clear definition of its meaning. This then creates challenges for practitioners when trying to assess and monitor progress,

raising further concerns around issues of construct validity. More knowledge in this area to guide future research is clearly requisite.

Methodological considerations and threats to internal validity such as history and maturation, treatment drift, diffusion of treatment and experimenter expectancy effects are regarded by the researcher as some of the key factors that may have impacted upon the nature of the present design. Although an experimental design study was initially employed to reduce issues of validity and generalisability, the researcher regards research in a real world situation extremely challenging and as discovered throughout this investigation, one cannot possibly control everything.

Literature and research in the field of MI has demonstrated its successes. More recently, practitioners have reported its value in education when applied in work with children and young people. This evidence base is slowly growing, with the current study being the first randomised control design in this area. Future studies should continue to evaluate the effectiveness of MI approaches when used in educational settings and research exploring *how* and *why* it is useful would further develop individuals understanding and conceptualisation of MI.

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Web Links

<http://www.motivationalinterview.org/library/index.html>

www.everychildmatters.gov.uk/publications/

APPENDIX 1

APPENDIX 2

APPENDIX 3