

An Evaluation of a
FRIENDS for Life Programme
in a mainstream secondary school
and its impact
on emotional distress, anxiety and
coping skills

Sarah Green

Thesis submitted to the University of Nottingham for the
degree of Doctor of Applied Educational Psychology

May 2013

Abstract

Abstract

'FRIENDS for Life' is a manualised, 10 week, Cognitive Behavioural Therapy (CBT) based programme designed to be run in school and community settings (Barrett, 2010b).

The programme has been introduced to schools within the local authority where the researcher is based via the local Targeted Mental Health in Schools (TAMHS) project.

The programme is well reviewed and is recommended by the World Health Organisation for the treatment of anxiety disorders in children (World Health Organisation, 2004). Previous research has evaluated the programme when delivered in closely monitored situations with optimal implementation.

The aim of this study is to evaluate the impact of FRIENDS for Life as implemented in a mainstream secondary school by school staff trained as part of the TAMHS initiative. This study makes an original contribution to the existing research base by evaluating the programme in a naturalistic, real world setting using an alternative methodology to the majority of published evaluations.

Data regarding implementation of the programme was collected and analysed using activity theory. A single case experimental design was used to monitor the impact of the intervention on the emotional distress, anxiety levels and coping strategies of 5 secondary school participants (aged 11-13) who had been identified by school staff as appearing anxious.

The findings suggest that participation in FRIENDS did not result in the hypothesised reductions in emotional distress, anxiety and negative coping skills or the hypothesised improvement in active coping skills. These results are discussed with regard to the finding that some aspects of the programme were not delivered. Analysis of the context using activity theory suggested that factors such as lack of time, space for delivery and experience and training impacted upon implementation.

Methodological issues contributing to these findings are considered and implications for the local TAMHS project and for Educational Psychologists are discussed.

Acknowledgements

Acknowledgements

I would like to thank the following for the support they have given me in completing the Doctorate in Applied Educational Psychology and the associated research;

- the tutor team at Nottingham University, particularly my supervisor Dr Sarah Atkinson,
- my fellow trainee psychologists on the Nottingham course and with me on placement,
- the staff and pupils at the school where I conducted my evaluation,
- the Educational Psychology Service where I have completed my training placement,
- my family and friends especially Richard, Toby and Georgia.

Contents

Abstract.....	2
Acknowledgements.....	3
Table of Tables.....	12
Table of Figures	14
1 Introduction to the study.....	15
1.1 Aim of study	15
1.2 The unique contribution of this research	16
1.3 The contribution to the Local Authority	16
1.4 Personal Interest in the research topic.....	16
1.5 Overview of the research.....	17
2 Literature Review	18
2.1 Aim of the literature review.....	18
2.2 The structure of the literature review	18
2.3 The Focus of the Evaluation	18
2.4 The Theory Underpinning Friends	19
2.4.1 Cognitive Behavioural Therapy (CBT).....	19
2.4.2 Emotional Distress	21
2.4.3 Anxiety	22
2.4.4 Depression	23
2.4.5 Factors contributing to the development of anxiety and depression	24
2.4.6 Resilience	25
2.4.7 Modifying anxiety and depression through developing resilience.....	26
2.4.8 Coping	26
2.4.8.1 The link between coping and emotional distress	27
2.4.8.2 Coping Strategies	27
2.4.9 Modifying anxiety and depression through developing coping skills.....	28
2.4.10 Summary	28
2.5 The National Context	29
2.5.1 The Prevalence of Emotional Distress.....	29
2.5.2 Impact of Emotional Distress	29
2.5.3 Targeted Mental Health in Schools (TAMHS)	30
2.5.4 The local context	31

2.5.5	The local TAMHS Project.....	32
2.5.6	The involvement of Educational Psychologists.....	32
2.5.7	Summary	32
2.6	A Systematic Review of Friends	33
2.6.1	The purpose of the review	33
2.6.2	Research question and conceptual framework	34
2.6.3	Review protocol	35
2.6.3.1	Search Strategy	35
2.6.3.2	Inclusion Criteria	35
2.6.3.3	Evaluation of the Studies	36
2.6.3.4	Method used in this review	38
2.6.4	Summary	39
2.7	Research synthesis.....	40
2.7.1	Weight of evidence A - What is the quality of the evaluation research?	40
2.7.1.1	Number and Size of studies	40
2.7.1.2	Research design quality	40
2.7.1.3	Intervention Fidelity.....	41
2.7.1.4	Follow up research.....	41
2.7.1.5	Control Groups.....	42
2.7.1.6	Ethical Issues	43
2.7.2	Weight of Evidence B –How appropriate are these study designs for the research question?.....	44
2.7.3	Weight of Evidence C – How appropriate is the focus of the included research for answering the review question?	45
2.7.3.1	Contexts	46
2.7.3.2	Delivery	47
2.7.3.3	Participation Selection	49
2.7.3.4	Participant age	50
2.7.3.5	Outcome Measures.....	52
2.7.3.6	Mechanisms of change	55
2.7.4	Overall Summary of Findings	57
2.7.5	Identification of Future Research	57
2.8	Introduction to the Research Evaluation of Friends	59
2.8.1	Rationale for the focus of the research	59
2.9	Research Questions	60

3	METHODOLOGY	61
3.1	Philosophical Assumptions and Stances	62
3.1.2	Different Paradigms	62
3.1.3	The Dominant Paradigms in Psychology and Education	64
3.1.4	The Pragmatic Paradigm	66
3.1.5	The Rationale for the Philosophical Basis of this study	67
3.2	Inquiry Logic or Methodology	68
3.2.1	Research purpose.....	69
3.2.1.1	Real World Research	69
3.2.1.2	Evaluation Research	69
3.2.1.3	Implementation Research.....	69
3.2.1.4	Naturalistic inquiry	70
3.2.2	Research methodology	71
3.2.2.1	Quantitative Methods.....	71
3.2.2.2	Qualitative Methods	71
3.2.2.3	Mixed Method Designs	71
3.2.3	Rationale for the approach used in this study	72
3.2.4	Limitations of Mixed Methods Designs.....	74
3.2.5	The qualitative aspect of the research.....	74
3.2.5.1	Case Studies	75
3.2.5.2	Limitations of case study design	75
3.2.5.3	The Development of the case study in the current research	76
3.2.6	The quantitative aspect of the research	76
3.2.6.1	Group experimental design	76
3.2.6.2	Single case experimental design	77
3.2.6.3	Advantages of SCED designs	78
3.2.6.4	The Use of SCED in the current research	78
3.2.6.5	SCED design variables	78
3.2.6.6	SCED Hypotheses	79
3.2.7	Summary of research design.....	79
3.2.8	Methods of data collection employed in this research	80
3.2.8.1	Case Study Data Collection Methods.....	82
3.2.8.2	SCED data collection methods	84
3.3	Sociopolitical Commitments	86

3.3.1	Stakeholders.....	86
3.3.2	The University of Nottingham.....	86
3.3.3	The Local Authority	86
3.3.4	The School, Staff and Young People	86
3.3.5	The Researcher	87
3.3.6	Contributions of the research	87
3.4	Specific Methods Used.....	89
3.4.1	Selection of School and Participants.....	89
3.4.1.1	School.....	89
3.4.1.2	Pupils.....	89
3.4.1.3	Description of school and participants	90
3.4.1.4	Description of Participants.....	90
3.4.2	Intervention	91
3.4.3	Procedure.....	92
3.4.3.1	Consent	92
3.4.3.2	Initial data collection.....	93
3.4.3.3	Baseline phase	93
3.4.3.4	Intervention phase	93
3.4.3.5	Post Intervention	94
3.4.4	Measures.....	95
3.4.4.1	Self-Report Scales.....	95
3.4.4.2	The Spence Children’s Anxiety Scale (SCAS)(Spence, 1999)	96
3.4.4.3	The Paediatric Index of Emotional Distress (PI-ED) (O’Connor et al., 2010b).	97
3.4.4.4	Kidcope (Spirito et al., 1998).....	99
3.4.4.5	Development of the KIDCOPE to include vignettes	100
3.4.4.6	Semi structured Interview	103
3.4.4.7	Structured Diary.....	103
3.5	Issues of Data Quality	104
3.5.1	The quantitative section of the study	104
3.5.2	Validity	104
3.5.3	Threats to Reliability	106
3.5.4	The qualitative section of the study	110
3.5.5	Ethical considerations	112
3.6	Summary of Method Section	115

4	ANALYSIS AND RESULTS	116
4.1	Analysis relating to research question 1	116
4.1.1	How was the programme implemented?	116
4.1.2	How did features of the context impact upon the delivery of the programme? 117	
4.1.2.1	Activity Theory	117
4.1.2.2	The rationale for the use of activity theory in this research.....	120
4.1.2.3	The process of analysis	122
4.2	Results relating to Research Question 1	123
4.2.1	How was the programme implemented?	123
4.2.2	How did features of the context impact upon the delivery of the programme? 125	
4.2.2.1	The Features of the Activity System	127
4.2.3	Contradictions within the activity system.....	130
4.2.4	Summary of Research Question 1.....	132
4.3	Analysis Relating to Research Questions 2 and 3	133
4.3.1	Method of Analysis	133
4.3.1.1	Analysis of pre / post data	133
4.3.2	Analysis of Single Case Experimental Design	135
4.3.2.1	Visual Analysis	135
4.3.2.2	Statistical Analysis	138
4.3.2.3	Statistical Significance Testing	138
4.3.2.4	Effect Sizes	139
4.3.3	Rationale for the selection of analysis methods in this study	140
4.3.4	Effect size	143
4.4	Results relating to research questions 2 and 3	145
4.4.1	Participant 1: Aaron	146
4.4.1.1	Aaron – Results Summary	151
4.4.1.1.1	Anxiety	151
4.4.1.1.2	Emotional Distress	151
4.4.1.1.3	Active Coping Skills	151
4.4.1.1.4	Negative and Avoidant Coping Skills.....	151
4.4.2	Participant 2: Benjamin.....	152
4.4.2.1	Benjamin – Results Summary.....	157
4.4.2.1.1	Anxiety	157

4.4.2.1.2	Emotional Distress	157
4.4.2.1.3	Active Coping Skills	157
4.4.2.1.4	Negative and Avoidant Coping Skills.....	157
4.4.3	Participant 3: Chand.....	158
4.4.3.1	Chand – Results Summary.....	163
4.4.3.1.1	Anxiety	163
4.4.3.1.2	Emotional Distress	163
4.4.3.1.3	Active Coping Skills	163
4.4.3.1.4	Negative and Avoidant Coping Skills.....	163
4.4.4	Participant 4: Dina.....	164
4.4.4.1	Dina – Results summary.....	169
4.4.4.1.1	Anxiety	169
4.4.4.1.2	Emotional Distress	169
4.4.4.1.3	Active Coping Skills	169
4.4.4.1.4	Negative and Avoidant Coping Skills.....	169
4.4.5	Participant 5: Erina.....	171
4.4.5.1	Erina – Results Summary.....	176
4.4.5.1.1	Anxiety	176
4.4.5.1.2	Emotional Distress	176
4.4.5.1.3	Active Coping Skills	176
4.4.5.1.4	Negative and Avoidant Coping Skills.....	176
4.4.6	Summary of Research Questions 2 and 3	178
5	DISCUSSION.....	180
5.1	Research question 1.....	180
5.1.1	Summary of findings	180
5.1.1.1	How was the programme implemented?	180
5.1.1.2	How did the features of the context impact upon the delivery of the programme?.....	181
5.1.2	Conclusion.....	182
5.2	Research Question 2	182
5.2.1	Hypotheses.....	182
5.2.2	Null Hypotheses	182
5.2.3	Summary of findings	183
5.2.4	Conclusion.....	183

5.2.5	Possible Explanations for these findings.....	183
5.3	Research question 3.....	184
5.3.1	Hypotheses.....	184
5.3.2	Null Hypotheses	184
5.3.3	Summary of Findings.....	185
5.3.4	Conclusions	185
5.3.5	Possible Explanations for these findings.....	185
5.4	Discussion of findings and links to previous research	187
5.4.1	The implementation of FRIENDS in a school setting by staff trained through TAMHS	187
5.4.1.1	Adaptations to the programme	187
5.4.1.2	Delivery by Learning Mentors not teachers.....	189
5.4.1.3	The need for programme modification	191
5.4.1.4	Increasing the capability of organizations to implement programmes.....	193
5.4.2	The impact of participation in FRIENDS on levels of emotional distress	195
5.4.3	The impact of participation in FRIENDS on coping	200
5.5	Evaluation of the methodology employed	202
5.5.1	Evaluation of the research design.....	202
5.5.2	Evaluation of method of collecting data about the implementation of FRIENDS	202
5.5.3	Evaluation of the analysis of the implementation of FRIENDS	204
5.5.4	Evaluation of the use of Single Case Experimental Design	204
5.5.5	The evaluation of the use of self-report measures.....	206
5.5.5.1	PI ED	206
5.5.5.1.1	Daily measurement of hassles and anxiety	207
5.5.5.2	KIDCOPE	208
5.5.5.3	SCAS	209
5.5.6	Conclusions regarding methodology employed	209
5.6	Implications of the Results.....	211
5.6.1	The implications within the research setting.....	211
5.6.2	Implications for TAMHS	211
5.6.3	Wider implications of the findings.....	213
5.6.4	Implications for Educational Psychologists.....	214
5.7	Future Research	215
5.8	Overall Conclusions.....	216

5.8.1	Summary of Findings.....	216
5.8.2	The Unique Contribution of the research.....	216
6	References	218
7	Appendices.....	233
7.1	Appendix 1– Systematic Review- Search strategy, inclusion criteria and excluded studies 233	
	Systematic Review Search Strategy	233
	Sources of papers.....	233
7.2	Appendix 2: Systematic Review of FRIENDS and references	235
7.3	Appendix 3: Ethical Committee Clearance Letter	236
7.4	Appendix 4 – Initial Contact Letter for Schools	237
7.5	Appendix 5 - Information presented to schools outlining the research	238
7.6	Appendix 6 - Staff Consent Information and form	241
7.7	Appendix 7 - Parent Information and Consent	243
7.8	Appendix 8 - Child Information and Consent Form	246
7.9	Appendix 9 - Timeline of Research Project Implementation	248
7.10	Appendix 10 - Spence Children Anxiety Scale (Spence, 1999) – Child Version.....	249
7.11	Appendix 11 - Spence Children Anxiety Scale (Spence, 1999) – Parent Version	251
7.12	Appendix 12 - Sample Questions from the PI ED (O'Connor et al., 2010b)	253
7.13	Appendix 13 - KIDCOPE (Spirito et al., 1998) and vignettes.....	255
7.14	Appendix 14 - Procedure for administering weekly measures.....	259
7.15	Appendix 15 - Structured Diary for completion by learning mentors after each FRIENDS session	260
7.16	Appendix 16: Semi structured interview guide for use with learning mentors.....	261
7.17	Appendix 17: Analysis of the delivered FRIENDS programme	262
7.18	Appendix 18 Transcript of interview with learning mentors	267
7.19	Appendix 19 Inter rater reliability check for SCED graphs	268
7.20	Appendix 20 Confusion table showing inter rater reliability for visual analysis of SCED graphs	270

Table of Tables

TABLE 2:1 SYSTEMATIC REVIEW STUDY INCLUSION CRITERIA	36
TABLE 2:2 FEATURES OF RESEARCH CONSIDERED IN THE SYSTEMATIC REVIEW	36
TABLE 2:3 WEIGHT OF EVIDENCE FRAMEWORK (GOUGH, 2007)	38
TABLE 3:1 THE KEY QUESTIONS REVEALING PARADIGM DIFFERENCE (GUBA & LINCOLN, 1994)	63
TABLE 3:2 THE PROPORTIONS OF DIFFERENT PARADIGMS AND METHODS EMPLOYED IN PUBLISHED PSYCHOLOGY AND EDUCATION RESEARCH (ALISE & TEDDLIE, 2010)	64
TABLE 3:3 A COMPARISON BETWEEN THE DOMINANT PARADIGMS IN THE FIELDS OF PSYCHOLOGY AND EDUCATION (MERTENS, 2010; TEDDLIE & TASHAKKORI, 2009, P. 88)	65
TABLE 3:4 THE AIMS OF IMPLEMENTATION RESEARCH (DOMITROVICH & GREENBERG, 2000, P. 197)	70
TABLE 3:5 ADVANTAGES AND DISADVANTAGES OF COMMON DATA COLLECTION METHODS (BASED ON (JOHNSON & TURNER, 2003); MERTENS (2010, P. 352); TEDDLIE AND TASHAKKORI (2009, P. 239); YIN (2009, P. 102))	81
TABLE 3:6 ASPECTS OF PROGRAMME INTEGRITY (DANE & SCHNEIDER, 1998, P. 45; DURLAK & DUPRE, 2008)	83
TABLE 3:7 WARNING SIGNS FOR ANXIETY AND DEPRESSION (FROM THE FACILITATOR RESOURCES AT WWW.PATHWAYSHRC.COM.AU)	89
TABLE 3:8 DESCRIPTION OF THE TOPICS INCLUDED IN INTERVENTION SESSIONS OF THE FRIENDS PROGRAMME (BARRETT, 2010A)	91
TABLE 3:9 TYPES OF COPING STRATEGY (SPIRITO, 1996.)	99
TABLE 3:10 EXAMPLE ITEM FROM KIDCOPE (SPIRITO ET AL., 1998)	99
TABLE 3:11 THREATS TO VALIDITY AND ACTIONS TAKEN TO REDUCE THIS (ROBSON, 2002)	105
TABLE 3:12 THREATS TO RELIABILITY AND ACTIONS TAKEN TO REDUCE THESE (ROBSON, 2002)	107
TABLE 3:13 QUALITY CONSIDERATIONS FOR SINGLE CASE EXPERIMENTAL DESIGNS (KRATOCHWILL ET AL., 2010; KRATOCHWILL ET AL., 2012; MERTENS, 2010)	109
TABLE 3:14 CRITERIA FOR TRUSTWORTHINESS IN QUALITATIVE RESEARCH (BASED ON TEDDLIE AND TASHAKKORI (2009, P. 296)	111
TABLE 3:15 ETHICAL CONSIDERATIONS	114
TABLE 4:1 CATEGORIES OF TREATMENT OUTCOME USING THE RELIABLE CHANGE INDEX (WISE, 2004)	134
TABLE 4:2 THE PSYCHOMETRIC PROPERTIES OF THE SPENCE CHILDREN'S ANXIETY SCALE USED TO CALCULATE THE RELIABLE CHANGE INDEX	135
TABLE 4:3 AREAS OF COMPARISON CONSIDERED DURING VISUAL ANALYSIS (KRATOCHWILL ET AL., 2010; NUGENT, 2010)	136
TABLE 4:4 DESCRIPTION OF THE COMPONENTS OF THE VISUAL ANALYSIS REPORT	142
TABLE 4:5 COHEN'S KAPPA SCORE INTERPRETATION (LANDIS & KOCH, 1977)	143
TABLE 4:6 A TABLE SHOWING AARON'S TREATMENT OUTCOME ANALYSIS	147
TABLE 4:7 SUMMARY OF VISUAL ANALYSIS OF AARON'S PI-ED SCORES	148
TABLE 4:8 SUMMARY OF VISUAL ANALYSIS OF AARON'S ACTIVE COPING SKILLS ON KIDCOPE BEFORE AND DURING PARTICIPATION IN FRIENDS	149
TABLE 4:9 SUMMARY OF VISUAL ANALYSIS OF AARON'S AVOIDANT AND NEGATIVE COPING SKILLS DURING PARTICIPATION IN FRIENDS	150
TABLE 4:10 A TABLE SHOWING BENJAMIN'S TREATMENT OUTCOME ANALYSIS	153
TABLE 4:11 SUMMARY OF VISUAL ANALYSIS OF BENJAMIN'S PI-ED SCORES	154
TABLE 4:12 SUMMARY OF VISUAL ANALYSIS OF BENJAMIN'S ACTIVE COPING SKILLS ON KIDCOPE BEFORE AND DURING PARTICIPATION IN FRIENDS	155
TABLE 4:13 SUMMARY OF VISUAL ANALYSIS OF BENJAMIN'S ACTIVE COPING SKILLS ON KIDCOPE BEFORE AND DURING PARTICIPATION IN FRIENDS	156
TABLE 4:14 A TABLE SHOWING CHAND'S TREATMENT OUTCOME ANALYSIS	159
TABLE 4:15 SUMMARY OF VISUAL ANALYSIS OF CHAND'S PI-ED SCORES	160

TABLE 4:16 SUMMARY OF VISUAL ANALYSIS OF CHAND’S ACTIVE COPING SKILLS ON KIDCOPE BEFORE AND DURING PARTICIPATION IN FRIENDS.....	161
TABLE 4:17 SUMMARY OF VISUAL ANALYSIS OF CHAND’S AVOIDANT AND NEGATIVE COPING SKILLS BEFORE AND DURING PARTICIPATION IN FRIENDS.....	162
TABLE 4:18 A TABLE SHOWING DINA’S TREATMENT OUTCOME ANALYSIS	165
TABLE 4:19 SUMMARY OF VISUAL ANALYSIS OF DINA’S PI-ED SCORES	166
TABLE 4:20 SUMMARY OF VISUAL ANALYSIS OF DINA’S ACTIVE COPING SKILLS ON KIDCOPE BEFORE AND DURING PARTICIPATION IN FRIENDS.....	167
TABLE 4:21 SUMMARY OF VISUAL ANALYSIS OF DINA’S AVOIDANT AND NEGATIVE COPING SKILLS BEFORE AND DURING PARTICIPATION IN FRIENDS.....	168
TABLE 4:22 A TABLE SHOWING ERINA’S TREATMENT OUTCOME ANALYSIS.....	172
TABLE 4:23 SUMMARY OF THE VISUAL ANALYSIS OF ERINA’S PI-ED SCORES	173
TABLE 4:24 SUMMARY OF VISUAL ANALYSIS OF ERINA’S ACTIVE COPING SKILLS ON KIDCOPE BEFORE AND DURING PARTICIPATION IN FRIENDS.....	174
TABLE 4:25 SUMMARY OF VISUAL ANALYSIS OF ERINA’S AVOIDANT AND NEGATIVE COPING SKILLS BEFORE AND DURING PARTICIPATION IN FRIENDS.....	175
TABLE 4:26 A SUMMARY OF CHANGES IN ANXIETY, EMOTIONAL DISTRESS AND COPING STRATEGIES IDENTIFIED FOR EACH PARTICIPANT.....	179
TABLE 5:1 HARING AND EATON’S INSTRUCTIONAL HIERARCHY (MILLER 2008)	188

Table of Figures

FIGURE 2-1 THE AGE RANGE OF THE PARTICIPANTS IN THE REVIEWED STUDIES	51
FIGURE 2-2 BAR GRAPH SHOWING MEASURES USED IN THE REVIEWED STUDIES	53
FIGURE 3-1 RESEARCH DESIGN EMPLOYED IN THIS STUDY.....	73
FIGURE 4-1 ENGESTROM'S FIRST GENERATION ACTIVITY THEORY MODEL (BASED ON DANIELS (2001, P. 86)	118
FIGURE 4-2 SECOND GENERATION ACTIVITY SYSTEM MODEL (BASED ON DANIELS (2001, P. 89))	119
FIGURE 4-3 A BAR GRAPH SHOWING THE PROPORTION OF ACTIVITIES SUGGESTED IN THE MANUAL WHICH WERE DELIVERED EACH SESSION	124
FIGURE 4-4 A 2ND GENERATION ACTIVITY SYSTEM DEPICTING THE IMPLEMENTATION OF FRIENDS IN THE CURRENT RESEARCH CONTEXT	126
FIGURE 4-5 A BAR GRAPH SHOWING AARON'S SCAS RESULTS PRE AND POST PARTICIPATION IN FRIENDS.....	147
FIGURE 4-6 A GRAPH SHOWING AARON'S PI-ED SCORES DURING BASELINE AND INTERVENTION PHASES.....	148
FIGURE 4-7 A GRAPH SHOWING AARON'S SELECTION OF ACTIVE COPING SKILLS ON KIDCOPE BEFORE AND DURING PARTICIPATION IN FRIENDS.....	149
FIGURE 4-8 A GRAPH SHOWING AARON'S SELECTION OF AVOIDANT AND NEGATIVE COPING SKILLS DURING PARTICIPATION IN FRIENDS	150
FIGURE 4-9 A BAR GRAPH SHOWING BENJAMIN'S SCAS RESULTS PRE AND POST PARTICIPATION IN FRIENDS	153
FIGURE 4-10 A GRAPH SHOWING BENJAMIN'S PI-ED SCORES DURING BASELINE AND INTERVENTION PHASES.....	154
FIGURE 4-11 A GRAPH SHOWING BENJAMIN'S SELECTION OF ACTIVE COPING SKILLS ON KIDCOPE BEFORE AND DURING PARTICIPATION IN FRIENDS.....	155
FIGURE 4-12 A GRAPH SHOWING BENJAMIN'S SELECTION OF AVOIDANT AND NEGATIVE COPING SKILLS DURING PARTICIPATION IN THE FRIENDS.....	156
FIGURE 4-13 A BAR GRAPH SHOWING CHAND'S RESULTS PRE AND POST PARTICIPATION IN FRIENDS	159
FIGURE 4-14 A GRAPH SHOWING CHAND'S PI-ED SCORES DURING BASELINE AND INTERVENTION PHASES.....	160
FIGURE 4-15 A GRAPH SHOWING CHAND'S SELECTION OF ACTIVE COPING SKILLS ON KIDCOPE BEFORE AND DURING PARTICIPATION IN FRIENDS.....	161
FIGURE 4-16 A GRAPH SHOWING CHAND'S SELECTION OF AVOIDANT AND NEGATIVE COPING SKILLS DURING PARTICIPATION IN FRIENDS	162
FIGURE 4-17 A BAR GRAPH SHOWING DINA'S SCAS RESULTS PRE AND POST PARTICIPATION IN FRIENDS	165
FIGURE 4-18 A GRAPH SHOWING DINA'S PI-ED SCORES DURING BASELINE AND INTERVENTION PHASES.....	166
FIGURE 4-19 A GRAPH SHOWING DINA'S SELECTION OF ACTIVE COPING SKILLS ON KIDCOPE BEFORE AND DURING PARTICIPATION IN FRIENDS.....	167
FIGURE 4-20 A GRAPH SHOWING DINA'S SELECTION OF AVOIDANT AND NEGATIVE COPING SKILLS DURING PARTICIPATION IN FRIENDS	168
FIGURE 4-21 A BAR GRAPH SHOWING ERINA'S SCAS RESULTS PRE AND POST PARTICIPATION IN FRIENDS	172
FIGURE 4-22 A GRAPH SHOWING ERINA'S PI-ED SCORES DURING BASELINE AND INTERVENTION PHASE.....	173
FIGURE 4-23 A GRAPH SHOWING ERINA'S SELECTION OF ACTIVE COPING SKILLS ON KIDCOPE BEFORE AND DURING PARTICIPATION IN FRIENDS.....	174
FIGURE 4-24 A GRAPH SHOWING ERINA'S SELECTION OF AVOIDANT AND NEGATIVE COPING SKILLS BEFORE AND DURING PARTICIPATION IN FRIENDS.....	175

Introduction

1 Introduction to the study

1.1 Aim of study

This research is an evaluation of the 'FRIENDS for Life' programme (henceforth referred to as FRIENDS).

FRIENDS is a 10 week long, manualised, school based programme which “aims to treat and prevent anxiety, increase emotional resilience and problem-solving abilities, and teach lifelong coping skills to young people to protect them against stress and change in later life” (Barrett, 2010b, p. ii). The programme has been extensively, and positively, reviewed and is recommended by the World Health Organization to prevent the development of anxiety disorders in children (World Health Organisation, 2004).

Positive evaluation of FRIENDS has resulted in adoption of this Australian programme internationally. Its adoption within the UK is evidenced by a number of published UK based evaluations (Liddle & MacMillan, 2010; Stallard, 2010; Stallard, Simpson, Anderson, & Goddard, 2008; Stallard, Simpson, Anderson, Hibbert, & Osborn, 2007; Stallard, Simpson, Carter, Osborn, & Bush, 2005). The programme has also been evaluated by previous doctoral students on the same training course as the author although these evaluations are currently unpublished (Clarke, 2011; Paul, 2011)

Within the local authority (LA) where the researcher is placed, school staff are being trained as facilitators and encouraged to deliver the programme to targeted young people in schools through the Targeted Mental Health in Schools (TAMHS) project. This study will contribute to the evaluation of FRIENDS as implemented in the local authority.

Previous positive evaluations of FRIENDS have frequently used group research designs which may obtain optimal levels of implementation when delivered by programme developers, researchers or psychologists. There has been little research considering

the impact of the programme when delivered in more naturalistic and 'real world' settings such as in schools delivered by school staff.

1.2 The unique contribution of this research

This study adds to the existing research base of FRIENDS by exploring the implementation and impact of the programme when it is delivered in a particular naturalistic, real world context i.e. in a secondary school delivered by staff trained through the TAMHS programme. The TAMHS project was a national, £60 million programme funded by the Department for Children, Schools and Families (DCSF), and subsequently the Department for Education (DFE), with the aim of improving the mental health support available for children (see section 2.5.3. for further detail).

A single case experimental design was used to assess the impact on the emotional distress and coping strategies of five pupils. Implementation data and interviews were used to explore how school staff implemented the programme.

1.3 The contribution to the Local Authority

The LA has continued to fund the TAMHS project which ended nationally in 2011 (UCL, 2011). In order to justify this investment the LA requires evaluation of the project. This research forms part of the Educational Psychology Service (EPS) evaluation of the impact of the TAMHS project and FRIENDS.

In addition, it is important that educational psychologists (EPs) are evidence based in their practice. This means not only basing their practice on research but also contributing to research and evaluation (Eodonable & Lauchlan, 2009). This enables resources to be selected and used to greater effect. This research evaluated the impact of FRIENDS and identified features of the implementation to improve, enabling FRIENDS to be used to greater effect.

1.4 Personal Interest in the research topic

The author of this research has a background in teaching secondary age pupils and has developed an interest in promoting the emotional wellbeing of this age group. She became involved in the working group developing and evaluating the TAMHS project at the beginning of her second year placement as a trainee Educational Psychologist

(TEP). This led to the development of this research which contributes towards evaluation of the TAMHS project as well as being submitted as part of Doctoral training in Applied Educational Psychology.

1.5 Overview of the research

The research will be presented in five chapters including this introductory chapter.

- Chapter 2. The **literature review** will give the context of the research, review previous evaluations of the FRIENDS programme and also discuss the constructs and change mechanisms which underpin the programme. Areas for further research will be identified and the research questions for this research will then be presented.
- Chapter 3. The **methodology** will consider alternative approaches to the research before describing and explaining the rationale for the design chosen. A detailed account of the method used in the research will be provided and limitations and ethical issues will be discussed.
- Chapter 4. The **results** section will consider methods of data analysis before describing and presenting the rationale for the analysis undertaken and presenting the results of the research.
- Chapter 5. The **discussion** will consider the findings in relation to the research questions and previous research. Limitations of the methods used will be identified. The implications of the research findings and its unique contribution will be considered before a final **conclusion** will summarise the findings of the research.

Literature Review

2 Literature Review

2.1 Aim of the literature review

The aim of this literature review is to examine and evaluate the theoretical and evidence basis for FRIENDS.

2.2 The structure of the literature review

The literature review will begin by outlining the FRIENDS programme and considering the programme in relation to the theoretical concepts of emotional distress, anxiety, depression, resilience and coping skills which it aims to change.

The review will then explain the context of the current interest in the programme.

The findings of a systematic literature review of previous FRIENDS evaluations will be reported including conclusions regarding the impact of the programme and the implications for future research.

The research questions to be addressed in this study will then be presented.

2.3 The Focus of the Evaluation

The term 'FRIENDS' will be used in this report to refer to the programme which is known by three different names each referring to the target age group of the programme; Fun Friends is aimed at 4-6 years. Friends for Life is aimed at 7-10 years. My Friends Youth is aimed at 10-17 years (PHRC, 2012).

FRIENDS "aims to treat and prevent anxiety, increase emotional resilience and problem-solving abilities, and teach lifelong coping skills to young people to protect them against stress and change in later life" (Barrett, 2010b, p. ii). The programme is a manualised 10 week intervention (with two additional booster and parent sessions). Sessions are between 1-2 hours per week. It is designed to be run with individuals, small groups and classes within school, hospital and community settings (Barrett, 2010b).

The interest in FRIENDS reflects current national and local concerns about the levels of emotional distress experienced by young people, as outlined in section 2.4. The next section will examine the theoretical basis for FRIENDS.

2.4 The Theory Underpinning Friends

FRIENDS developed from an individual cognitive-behavioural treatment (CBT) programme for anxious children (Barrett & Pahl, 2006). It aims to prevent:

childhood anxiety and depression through the application of firm cognitive behavioural principles and the building of emotional resilience. It aims to reduce the incidence of serious psychological disorders, emotional distress and impairment in social functioning by teaching children and young people how to cope with, and manage, anxiety both now and in later life (Barrett, 2007, p. 4).

This section will consider the constructs which underpin the FRIENDS programme.

2.4.1 Cognitive Behavioural Therapy (CBT)

CBT is a therapeutic approach which arose from the behaviourism and cognitive schools of psychology (McLeod, 2003). The approach is “orientated towards client action to produce change”(p138). This occurs through cognitive approaches such as; addressing unhelpful thoughts, for example by challenging irrational beliefs; reframing issues and stopping anxious thoughts; and through behavioural approaches. These behavioural approaches often involve behaviour experiments where particular types of behaviour are tried and the outcome evaluated to challenge faulty cognitions (Westbrook, Kennerley, & Kirk, 2011). Some of these approaches are the basis for the activities included in the FRIENDS programme.

The use of CBT as a successful method of supporting people experiencing emotional distress is well documented (Hofmann & Smits, 2008). Research reviews indicate that CBT approaches are effective as both a prevention and treatment of anxiety and depression (Calear & Christensen, 2010; Compton, March, Brent, Albano, Weersing, & Curry, 2004; Fisak, Richard, & Mann, 2011; James, Soler, & Weatherall, 2005; Neil & Christensen, 2009; Saavedra, Silverman, Morgan-Lopez, & Kurtines, 2010; Schoenfeld & Mathur, 2009).

Alternative, pharmacological treatments for anxiety and depression exist. Ginsburg, Kendall, Sakolsky, Compton, Piacentini, Albano, Walkup, Sherrill, Coffey, Rynn, Keeton, McCracken, Bergman, Iyengar, Birmaher, and March (2011) reviewed remission rates of 488 children and adolescents ages 7-17 years, diagnosed with anxiety, who received one of four twelve week interventions; clinical treatment with the drug sertraline, cognitive behaviour therapy (CBT), a combination; or clinical management with a placebo. They reported remission rates of 46% to 68% for the combined treatment, 34% to 46% for the drug treatment, 20% to 46% for CBT, and 15% to 27% for the placebo. It should be noted that the choice of remission rate, meaning achieving a nearly symptom-free state, is more stringent than monitoring significant levels of improvement on anxiety measures. This research suggests that drug therapies are similar in effectiveness to CBT, although a combination of the two may be more effective. However, this research does not account for side effects of drug therapy and also the possible long term preventative effects of CBT. This may make CBT the preferential treatment for anxiety.

It should be noted that one of the issues with evaluating CBT as a treatment for anxiety and depression is that evaluations of a few programmes, particularly FRIENDS, dominate the reviews (Fisak et al., 2011; Neil & Christensen, 2009). It therefore becomes difficult to assess the efficacy of CBT approaches to treatment and prevention independently of the efficacy of the FRIENDS programme. The claim that FRIENDS is a CBT based programme also requires further consideration. Many of the skill components of FRIENDS are compatible with the view of CBT as practical skill based intervention (Stallard, 2009). However, features of CBT include it being 'collaborative' and children having an 'active role' in exploring the reality of their beliefs (Stallard, 2009). The extent that this is achievable when the programme is delivered to a group of children by untrained practitioners is questionable, although group CBT is suggested as a treatment for mild depression (NICE, 2005). The relationship between the evidence base for the efficacy of CBT and the efficacy of FRIENDS therefore appears unclear and would benefit from additional research with more clearly defined constructs.

2.4.2 Emotional Distress

It has been suggested that emotional distress is a higher level concept incorporating anxiety and depression (O'Connor, Carney, House, Ferguson, & O'Connor, 2010b). The argument for such a concept stems from a number of observations:

- Children and Adolescents have high comorbidity levels for anxiety and depression, of between 15.9% and 61.9% (Kendall, Kortlander, Chansky, & Brady, 1992).
- The symptoms included on self-report measures of anxiety and depression overlap to a large extent (Seligman & Ollendick, 1998)
- Self-report measures may fail to discriminate between the two conditions (Kendall et al., 1992; Strauss, Last, Hersen, & Kazdin, 1988).
- Both anxiety and depression appear to respond to a single type of treatment such as CBT (Compton et al., 2004)
- Anxiety and depression appear to exist on a developmental continuum with children exhibiting anxiety symptoms at a younger age and depressive symptoms when older (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003a; Kovacs & Devlin, 1998; Seligman & Ollendick, 1998).

This has led to the argument that instead of classifying anxiety and depression as different disorders they could be recognised as subordinate aspects of a higher order construct, cothymia. (O'Connor et al., 2010b; Tyrer, 2001). However, this argument has not been supported by factor analysis, investigating the possibility of single, dual and tripartite factor models, which supports the existence of anxiety and depression as independent but significantly related constructs (Ollendick, Seligman, Goza, Byrd, & Singh, 2003).

The focus of the local TAMHS evaluation of the impact of delivering FRIENDS is the reduction of anxiety in children identified by school staff as appearing anxious. Within the context of the current study the author recognises that it may be difficult to separate the constructs of anxiety and depression due to factors described above and

the lack of knowledge and experience of school staff in identifying anxiety and depression. The broader concept of emotional distress appears useful in that it obviates these difficulties. In addition preventing and lowering emotional distress has been identified as a desirable goal for the programme (Barrett, 2007). The constructs of depression and anxiety will be individually examined in the next section but will be considered together, as emotional distress, in this study.

2.4.3 Anxiety

Anxiety has been described as “an unpleasant emotional state, which is characterised by subjective feelings of tension, apprehension and worry, and by activation or arousal of the autonomic nervous system” (Hae-ra, 2009, p. 50).

Anxiety itself is not problematic. It is universally experienced and serves an adaptive function. Zinbarg, Craske, and Barlow (2006) suggest that the experience of anxiety is a simultaneous activation and inhibition of the ‘fight or flight’ mechanism in preparation for emerging danger. The unpleasantness of the anxious response results in behaviour which attempts to minimise these feelings. Beck and Emery (2005) describe a ‘normal’ anxious response as one which “is aroused by a “realistic” danger and ...dissipates when the danger is no longer present” (p.30).

Barrett (2000) suggests that anxiety in childhood is part of normal development and acquiring control over their fears, correctly judging the danger inherent in situations, and developing appropriate responses are skills children and young people need to develop.

Inappropriate levels of anxiety occur when cognitive ‘misperceptions and exaggerations of the danger have occurred’ (Beck and Emery 2005 p.15). The characteristics of such anxiety disorders are “... an irrational fear of a situation or stimulus that is in excess of what would be considered reasonable and age appropriate. ... Common symptoms include restlessness, fatigue, difficulty concentrating, irritability, muscle tension, nausea, or sleep disturbances” (McLoone, Hudson, & Rapee, 2006). Anxiety disorders may be diagnosed when excessive worry is present for most days over a period of longer than 6 months and is difficult to control.

For generalised anxiety disorders the presence of one of the following 6 symptoms is also necessary: restlessness, fatigue, difficulty concentrating, irritability, muscle tension and sleep disturbance (Stallard, 2009). Reducing and preventing anxiety disorders is an aim of FRIENDS.

Anxiety disorders may occur, at clinically recognised severity, in up to 10% of the adolescent population (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003b). High levels of anxiety in adolescents and children are associated with higher risk of developing depressive symptoms (Cole, Peeke, Martin, Truglio, & Seroczynski, 1998).

It should be noted that the literature refers to both state and trait anxiety. State anxiety is a transient emotion experienced in circumstances with particular levels of stress. Trait anxiety is a more stable aspect of personality which may reflect 'anxiety proneness' or a predisposition to respond to situations with a disproportionate level of distress (Hae-ra, 2009). This study is considering state anxiety which appears more amenable to change.

2.4.4 Depression

Depression is understood as an emotional state associated with "great sadness and apprehension; feelings of worthlessness and guilt; withdrawal from others; loss of sleep, appetite and sexual desire; and loss of interest and pleasure in usual activities" (Barrett, 2010a, p. 4). Unlike anxiety it appears to offer no advantages, although evolutionary psychologists have argued that depression results in withdrawal from society, at points where excess efforts would not be beneficial e.g. following the death of a loved one, and is, therefore, protective (Nesse, 1999).

Prevalence rates are estimated to be around 8% of the adolescent population (Merry, McDowell, Hetrick, Bir, & Muller, 2009). Around 20% of people are reported to have experienced at least one episode of depression by their early 20s (Shortt & Spence, 2006). Levels of depression can be viewed as a continuum depending upon the number of symptoms present. In children and young people 'mild depression' would describe four symptoms present almost all of the time for over two weeks whilst severe depression would have seven or more symptoms (NICE, 2005). The NICE

guidelines suggest that mild depression can be detected and managed by workers in community settings such as schools.

2.4.5 Factors contributing to the development of anxiety and depression

FRIENDS aims to reduce emotional distress by building emotional resilience and teaching children how to cope with and manage anxiety (Barrett, 2010a). Before the constructs of resilience and coping are examined it is necessary to acknowledge that there are alternative factors which may contribute to the development of emotional distress.

A number of theories of depression have been developed. These include neurological and biochemical theories of depression which were based upon the response of patients to physical therapies such as drugs (Beck, 1967). These theories are supported by evidence of genetic inheritance and knowledge of biological mechanisms (Shortt & Spence, 2006). Psychodynamic theories of depression focus upon early relationships and are supported by research evidence suggesting disruption to effective parenting, for example due to maternal absence, depression or psychopathology, may contribute to subsequent child depression (Shortt & Spence, 2006). Cognitive theories of depression focus upon the role of thoughts, expectations, beliefs and interpretations of emotion and behaviour (Beck, 1967; Shortt & Spence, 2006). A developmental-ecological model of depression is an interactionist theory acknowledging the importance of individual biological and cognitive factors together with the individual's social context which includes family support, life experiences and cultural factors (Shortt & Spence, 2006).

There are similar theories for the development of anxiety disorders. These include; biological theories, such as genetic sensitivities, the role of brain function and neurochemistry; behavioural theories, in which anxious responses are transmitted through modelling and reinforcement; cognitive theories, when attribution, judgement, attention and memory biases occur; and interactionist theories or developmental-ecological models which acknowledge the additional importance of the social and interpersonal environment of the child (Weems & Stickle, 2005).

It is beyond the scope of this study to evaluate these theories of anxiety and depression; however it is useful to acknowledge that alternative theoretical views of anxiety and depression exist. The CBT basis of FRIENDS indicates the adoption of an interactionist approach in which cognitive and behavioural skills mediate the influence of biological and environmental factors. FRIENDS seeks to reduce anxiety and depression through a focus on building resilience. The next section will consider this construct.

2.4.6 Resilience

Resilience has been defined as;

qualities which cushion a vulnerable child from the worst effects of adversity in whatever form it takes and which may help a child or young person to cope, survive and even thrive in the face of great hurt and disadvantage (Gilligan, 1997, p. 12).

This construct is usefully considered in relation to its related construct of risk i.e., those factors associated with negative outcomes, such as anxiety and depression, for children and young people (Dent & Cameron, 2003). A wide variety of methods have been used, over many years, to identify risk factors (Garmezy, 1996).

However, the large variation in the responses children have to these risk experiences has resulted in increasing interest in the protective factors which foster resilience in children (Rutter, 1999). This is of particular interest where the risk factors are not open to amelioration and protective factors may have compensatory effects and offset the risk factors which a child may experience (Masten, 2001).

Resilience as a construct has been criticised. Garmezy (1996) suggested that resilience has been enthusiastically adopted without its meaning being fully substantiated. Luthar, Cicchetti, and Becker (2000) identified issues with, ambiguous and inconsistent definitions, instability of resilience within individuals, and the usefulness of the construct. Rutter (2006) has elaborated on this, suggesting that it is only possible to research resilience when risks can be quantified and when a wide range of outcomes

are considered. In addition the relationship with risk is complicated by a realisation that exposure to risk may strengthen resistance to later stress rather than contribute to negative outcomes. This lack of clarity, regarding what resilience is, contributes to difficulties identifying and measuring resilience.

Despite these difficulties a number of resilience factors have been identified.

Greenberg, Domitrovich, and Bumbarger (2001) identified three domains of protective factors:

- individual characteristics such as cognitive skills, social-cognitive skills, social skills and temperament;
- environmental interactions such as secure attachments to parents, attachments to peers and role models with positive health behaviours and pro-social values;
- and contextual features such as quality schools and good home / school relations.

2.4.7 Modifying anxiety and depression through developing resilience

It seems that some of these factors are more open to amelioration than others. The FRIENDS programme claims to increase resilience by focusing on factors such as building peer and other support networks, choosing positive role models, promoting self-confidence, and promoting positive relationships (Barrett, 2010a). It can be argued that these factors are difficult to quantify and the processes through which they increase resilience are unclear. Other individual factors such as cognitive skills may be more compatible with learning and school based intervention and also have a theoretical underpinning in terms of their relationship with anxiety. The cognitive skill most explicitly taught by FRIENDS is coping (Barrett, 2010b) although participation may impact on some of the other factors described.

2.4.8 Coping

The ability to cope with challenging situations is hypothesised to form part of a child's resilience and also part of their appraisal of a stressful situation (see below).

2.4.8.1 The link between coping and emotional distress

Emotions have been described as resulting from initial or primary appraisal of a situation. Lazarus (1999) has identified three components of cognitive appraisal; goal relevance, goal congruence and ego involvement. Goal relevance is the importance of the situation for the individual. If their goals are not affected by the interaction then there will be no emotional response. If the individual's goals are implicated then the direction of the implication or its congruence to the goal become important i.e. an interaction which supports the goal will result in a positive emotion whilst an interaction which is likely to have a negative impact on goal attainment will result in a negative emotion. The third component is ego involvement or the extent to which the individual has control over the situation. Anxiety is one possible response to an external stressor, another is anger.

Secondary appraisal involves an appraisal of the ability to cope with a situation in terms of coping strategies and resources (Beck & Emery, 2005). Lazarus (1999) argues that confidence in our ability to overcome obstacles and danger is reflected in how likely we are to feel challenged rather than threatened by the situation. Anxiety disorders occur when an individual inaccurately perceives that they do not have the resources to cope with a situation. Inaccurate secondary appraisal is also apparent in the primary triad of depression which suggests experiences, the self, and the future are construed in a negative way. The development of coping skills may therefore reduce anxiety and depression through altering appraisal of the situation.

2.4.8.2 Coping Strategies

Lazarus and Folkman (1984) defined coping as; 'constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person' (p. 141). These strategies are not those which are automated responses but rather those which require effort. Lazarus (1993) describes two ways in which coping behaviour impacts on anxiety. Problem-based coping involves addressing the cause of the anxiety and finding a solution to the problem thus removing the source of the stress. Emotion focused coping involves changing the understanding and interpretation of the source of anxiety thus mediating our anxious response. Spirito, Stark, and Williams (1988)

identified ten coping strategies commonly mentioned in the literature. These were problem-solving, distraction, social support, social withdrawal, cognitive restructuring, self-criticism, blaming others, emotional regulation, wishful thinking and resignation. Some strategies are more appropriate in particular situations than others and so the strategies cannot be valued as being better than each other unless this is in relation to a specific situation (Folkman & Lazarus, 1988). Developing situation appropriate coping strategies is viewed by Lazarus (1999) as a better prospect for reducing emotional distress than trying to modify “relatively fixed personal resources” (p.178).

The type of coping strategy used has been linked to the development of depression in adolescents (Murberg & Bru, 2005). Seiffge-Krenke (2000) found that avoidant coping styles were linked with higher levels of depressive symptoms. Garnefski, Boon, and Kraaij (2003) found that self-blaming attributions were related to depression whilst positive reappraisal of situations was linked to fewer depressive symptoms. Murberg and Bru (2005) found that seeking parental support was related to reduced symptoms of depression whereas aggressive coping was linked to depressive symptoms. With all of these studies the direction of effect is unclear; it may be that depressive mood impacts upon the selection of coping strategies. Nevertheless development of more appropriate coping strategies may reduce depressive symptoms.

2.4.9 Modifying anxiety and depression through developing coping skills

FRIENDS seeks to build on coping strategies by; teaching problem solving skills, thus developing problem based coping; by encouraging the development of positive coping skills, such as cognitive restructuring or appraisal; valuing brave coping behaviour and developing relaxation skills to add to the available repertoire of coping skills (Barrett, 2010a, 2010b).

2.4.10 Summary

This section of the literature review has considered the theoretical constructs of emotional distress, anxiety, depression, resilience, and coping skills which FRIENDS aims to modify. In an evaluation of FRIENDS it is useful to assess the impact of the

programme on those constructs theoretically contributing to the outcome as well as on emotional distress itself.

There may be other benefits of FRIENDS which also increase resilience and reduce emotional distress although they have not been considered here.

2.5 The National Context

2.5.1 The Prevalence of Emotional Distress

It has been argued that Emotional Distress is be a higher order construct consisting of the lower order constructs of anxiety and depression (O'Connor et al., 2010b).

Levels of adolescent emotional distress appear to be increasing. Twice as many young people, using self-report measures, reported frequent feelings of depression or anxiety in 2006 compared to a 1986 sample (Collishaw, Maughan, Natarajan, & Pickles, 2010). In 2004, 10% of children and young people (5-16 years) had a clinically diagnosed mental disorder such as emotional disorders (4%), anxiety disorders (3%) and depression (1%)(Green, McGinnity, Meltzer, Ford, & Goodman, 2005). This maybe an under representation as children with anxiety disorders may be overlooked as they “tend to be shy, co-operative and compliant” (Barrett, Farrell, Ollendick, & Dadds, 2006, p. 56).

2.5.2 Impact of Emotional Distress

Anxiety disorders can have a negative impact on many aspects of life including self-confidence, social interaction, academic achievements and the enjoyment of life (Barrett & Pahl, 2006).

The long term risks associated with untreated anxiety disorders include further mental health problems, reduced completion of school, teen childbearing and early marriage, illicit drug dependence and educational underachievement as young adults (Saavedra et al., 2010; Woodward & Fergusson, 2001).

The experience of anxiety in childhood has been linked to the later development of depression (Beesdo, Pine, Lieb, & Wittchen, 2010). Depression occurs at a level which

impairs function in between 2 % and 10% of children and adolescents (Dopheide, 2006). Depression has been linked to negative outcomes such as poor academic achievement, social dysfunction, substance abuse, and suicidal behaviour (Merry et al., 2009). It is strongly associated with the risk of adult depression (Barrett et al., 2006; Fombonne, Wostear, Cooper, Harrington, & Rutter, 2001; Greden, 2001). Greden (2001) states that the long term functional effects of adult depression include disrupted physical, social and role functions which are as serious and devastating as for chronic medical disorders such as diabetes.

There are economic consequences of emotional distress. McCrone, Dhanasiri, Patel, Knapp, and Lawton-Smith (2008) predicted that the number of people with depression in England will rise 17% from 1.24 million in 2007 to 1.45 million in 2026. When prescribed drugs, inpatient care, other NHS services, supported accommodation, social services and lost employment in terms of workplace absenteeism are considered, the overall cost of depression in England in 2007 was £7.5 billion. This may rise to £12.2 billion by 2026 (McCrone et al., 2008)

Research therefore indicates that there is a psychological, social and economic basis for developing interventions to prevent and treat child and adolescent emotional distress. Schools provide an opportunity for such intervention to occur. An example has been the development of the TAMHS project.

2.5.3 Targeted Mental Health in Schools (TAMHS)

The TAMHS project was a national, £60 million programme funded by the Department for Children, Schools and Families (DCSF), and subsequently the Department for Education (DFE), between 2008 and 2011 (UCL, 2011). The aim of the TAMHS project was to improve the mental health support available for children by addressing two key elements: strategic integration of all the agencies involved and evidence informed practice (DCSF, 2008). This included an expectation that agencies would collect practice-based evidence and incorporate it into their own planning (DCSF, 2008). The TAMHS project was designed to operate at three levels or waves. Wave 1 includes effective whole school frameworks which promote emotional wellbeing and mental

health. Wave 2 includes small group work for children who need help to develop social and emotional skills and Wave 3 includes therapeutic interventions (DCSF, 2008). Within the author's locality FRIENDS training has been delivered as part of a TAMHS project with the aim of the programme being used in schools as a Wave 2 intervention.

2.5.4 The local context

The LA within which this evaluation takes place is a large urban authority in central England. The English Indices of Deprivation Statistics consider multiple aspects of deprivation including employment, income, health and disability, education, skills and training, crime, housing and services and living environment deprivation. According to these statistics the LA is placed within the ten LAs, out of 354 in England, with the highest proportion of deprived areas within its district, (Department for Communities and Local Government, 2011) . Previous research suggests that poor material standards of living are significantly associated with common mental disorders (Weich & Lewis, 1998) .

A survey conducted within the LA on the well-being of the children in authority schools (the Brighter Futures Well Being Survey (Oland, 2012)) indicated that of 11,240 children, aged between 7 and 18, participating in the survey during the academic year 2010/2011;

- 9% had significant difficulties with their overall mental health,
- 16% had significant behavioural problems,
- 8% had significant emotional problems,
- Nearly twice as many children with Special Educational Needs (SEN) had mental health difficulties compared to children without SEN, particularly behavioural problems (Oland, 2012).

This contextual data suggests a local need to support children with their psychological well-being, although the survey was promoted through the TAMHS project so there may be a bias toward responses from schools with greater concerns about the psychological wellbeing of their students. The LA has responded to this by investing in a TAMHS project.

2.5.5 The local TAMHS Project

The LA became involved in Phase Three of the national TAMHS project beginning in April 2010. The authority continued to fund the project until April 2013. Within the LA the TAMHS project aimed to “work collaboratively with schools across [location] to enhance the emotional well-being of children who are at risk of developing mental health problems” (Oland, 2012). All maintained schools could apply to become TAMHS schools with no additional financial cost. All TAMHS schools attended a conference on emotional wellbeing and received training on the delivery of FRIENDS in addition to being able to access training in topics such as self-harm, eating disorders and bullying. Schools are encouraged to use FRIENDS as a Wave 2 intervention i.e., to deliver the programme to small groups of children who have been identified as being at risk of developing anxiety problems. Evaluation of the TAMHS activities is part of the planning cycle.

2.5.6 The involvement of Educational Psychologists

Within the LA the TAMHS project is run by a multi-agency team led by the Educational Psychology Service (EPS). The TAMHS project provides the opportunity for educational psychologists (EPs) to contribute by recommending evidence based strategies for change. In addition EPs also have the research skills to evaluate projects such as TAMHS.

The impact of the FRIENDS training delivered by TAMHS on the emotional well-being of children participating in the programme is being evaluated using pre-test and post-test anxiety scores on the Spence Children’s Anxiety Scale (SCAS)(Spence, 1999). In addition this research study will contribute towards the evaluation of the project.

2.5.7 Summary

The development of initiatives such as TAMHS, reflects current national and local concerns about the levels of emotional distress experienced by young people. The local TAMHS project aims to support the mental health of young people using evidence based interventions such as FRIENDS, to treat and prevent emotional distress.

2.6 A Systematic Review of Friends

2.6.1 The purpose of the review

A systematic review is “a set of formal processes for bringing together different types of evidence so that we can be clear about what we know from research and how we know it” (Gough, 2007 p.214). A particular feature of systematic reviews is that they “... are pieces of research and employ a set of explicit methods in order to maximise the production of valid and reliable findings” (Evans, Harden, & Thomas, 2004, p. 4).

Such reviews are important; synthesis of the results of a number of studies, evaluated in terms of quality, provides a more reliable basis for decision making than individual studies (Petticrew & Roberts, 2006). Individual studies may provide an “unbalanced and unrepresentative view” of the research evaluating a particular intervention, due to the tendency for studies to be “sample-specific, time-specific, ... context specific ...and vary in methodological rigor” (Davies, Newcomer, & Soydan, 2006, p. 176). Systematic reviews also reveal areas where there is a paucity of reliable research and where new research is required (Petticrew & Roberts, 2006).

One systematic review of the evidence pertaining to FRIENDS has been published (Briesch, Hagermoser Sanetti, & Briesch, 2010). Briesch et al. (2010) concluded that “research to date suggests that FRIENDS may be a promising intervention for the treatment of anxiety in school based settings” (p163). This study used a statistical synthesis approach, calculating effect sizes using Cohen’s *d*. Cohen (1988) defined effect sizes as "small, $d = .2$," "medium, $d = .5$," and "large, $d = .8$ ", (p. 25). This enables results from combined studies to be reported. The review reported that the mean effect size (ES) of FRIENDS across anxiety measures for children diagnosed with anxiety was large (ES = 0.84) and nearly twice that of children identified as at risk (ES=0.44) . The effect size for the general population was reported to be small (ES=0.24) although this will reflect lower anxiety levels and floor effects of the measures. Combining effect sizes also indicated that the effect size when the intervention was implemented by teachers or school staff was low (ES=0.22) compared to when it was implemented by researchers or trained providers (ES = 0.56).

A disadvantage of statistical meta-analysis is that it may combine dissimilar studies, focusing on a range of ages, contexts, delivery and origins thus losing detail about who the intervention works for and in what context. Additionally Briesch et al. (2010) identified methodological weaknesses of the studies reviewed including, lack of replication, lack of clarity regarding the impact of programme components and contradictory evidence regarding the efficacy of teacher delivery.

Despite such a recent review another review has been undertaken here as part of this literature review. This enabled the inclusion of papers published more recently and focusing on research which is more pertinent to the situation in which FRIENDS is being implemented within the local TAMHS project, such as school based intervention studies.

This review follows a structure outlined by Gough (2004). He identified the stages of review as: the development of the research question and conceptual framework; the development of a review protocol, including inclusion criteria, the search strategy and methods of data extraction; and the production of a synthesis of the research reviewed.

2.6.2 Research question and conceptual framework

The purpose of this review was to examine the research evidence which has evaluated the FRIENDS programme. This enabled the local adoption of the FRIENDS programme to be set in the context of previous research evaluations but also for this evidence base to be interrogated with regard to the specific application of FRIENDS under evaluation i.e. as a targeted intervention with children identified by school staff as suitable beneficiaries of the programme, delivered in school, by school staff trained as part of a TAMHS project, in a large urban area of the UK. The review was also used to identify areas for further research.

The key research question of this review was:

- What impact does the FRIENDS for Life programme have on children and young people?

Within this, however, there are number of other questions which were addressed.

These included:

- What is the quality of the evaluation research?
- What contexts have been evaluated?
- What study designs have been employed in the evaluations?
- What measures and outcomes for children have been evaluated?
- What are the findings of the evaluation studies?

2.6.3 Review protocol

2.6.3.1 Search Strategy

The details of the search strategy are therefore crucial to indicate the rigour of the search and the credibility of the conclusions reached (Evans et al., 2004). The search process outlined here is presented in more detail in Appendix 1.

The initial source of relevant research was the website of the Pathways Health and Research Centre (www.pathwayshrc.com.au) the organisation which has developed the FRIENDS interventions. Further searches were carried out using four databases which form part of University of Nottingham e-gateway and Google© scholar using a variety of search terms (see Appendix 1). The titles were read and where the focus of the paper was ambiguous the abstract was read. Papers not relevant to the study and duplications were discarded.

A total of 62 papers were identified. The selection strategy described below was then applied in order to identify which papers to include in the review.

2.6.3.2 Inclusion Criteria

In order to meet the objectives of the review the studies included in the review had to meet a number of criteria (see Table 2:1). The papers which were excluded and the reasons for excluding them are shown in Appendix 1

Inclusion Criteria

- The research had to be published in a peer reviewed journal.
- The studies had to report evaluative research into the efficacy of the programme.
- The research had to focus upon measurable outcomes for the child.
- The study had to include pre and post measures.
- The target population had to be similar to the current setting.
- The intervention was delivered in a school setting.

Table 2:1 Systematic Review Study Inclusion Criteria

Ideally this search and selection strategy should be carried out by two or more reviewers to remove the possibility of bias and ensure that the selection criteria are being correctly applied (Petticrew & Roberts, 2006). Unfortunately that was not possible in the current study which impacts upon the quality of the study and the credibility of the findings.

In total 18 published studies were identified for inclusion in the review although 3 of these were follow ups to previously published studies and have been included with the original studies to give 15 studies.

2.6.3.3 Evaluation of the Studies

Hard copies of the full research articles were obtained for all of the studies identified. These were read and tabulated to show the features listed in table 2:2 (see Appendix 2).

- Author(s)
- Date published
- Title
- Research context
- Intervention delivery features
- Participants characteristics
- Measures used
- Research Design employed
- Results summary

Table 2:2 Features of research considered in the systematic review

These studies were then evaluated in relation to the quality or weight of evidence they provided. There are various ways of evaluating the quality of evidence. Several approaches were considered. One possibility was the Maryland Scale of Scientific Methods (MSSM) (Sherman, Gottfredson, MacKenzie, Eck, Reuter, & Bushway, 1998). This categorises research according to the methodologies employed and the threats to validity apparent within them.

However, there are limitations in allocating research projects a quality rating on the basis of research design. For example, implementation mistakes which threaten validity are lost in the generalisation of study quality and the weaknesses of the measures employed may not be acknowledged within this rating system. This approach is also biased toward clinical studies and Randomised Control Trials (RCTs), which are evaluated as most valid, although they may not provide good evidence of what works in 'real world' educational settings (Evans & Benefield, 2001).

These limitations have been recognised by approaches which accept less tightly controlled research as a Best Evidence Synthesis (Moran, Ghate, & van der Merwe, 2004; Slavin, 1995). A Best Evidence Synthesis recognises that "external validity should be valued as highly as internal validity" (Slavin, 1995, p. 13). This is important in educational settings where it is not always possible to tightly control the research context and, if it were, this would not reflect the complexity of everyday life in schools.

However, both the MSSM and the Best Evidence Synthesis evaluate studies in terms of the question that the research originally sought to answer although this may not be the question which the review is addressing. An alternative approach is the Weight of Evidence Framework (Gough, 2007) (See Table 2:3).

	Weight of Evidence Framework
Weight of Evidence A	The trustworthiness of the results judged by the quality of the study within the accepted norms for undertaking the particular type of research design used in the study (methodological quality).
Weight of Evidence B	The appropriateness of the use of that study design for addressing the systematic review's research question (methodological relevance).
Weight of Evidence C	The appropriateness of focus of the research for answering the review question . (topic relevance).
Weight of Evidence D	Judgement of overall weight of evidence (WoE) based on the assessments made for each of the criteria A-C.

Table 2:3 Weight of Evidence framework (Gough, 2007)

This framework evaluates the methodological quality of the study, but in terms of; the implementation of the design used, rather than an imposed hierarchy of evidence quality; the appropriateness of the study design, in terms of the review question; and the appropriateness of the focus of the research in answering the research question.

One of the difficulties of the approach is that it does not stipulate how each judgement A to C is to be made and the relative contributions of the judgements to the overall weight of evidence. Gough (2004) predicted a developing consensus about how such judgements are made but at present these decisions appear to be agreed by the individual review teams.

2.6.3.4 Method used in this review

In this review identified studies were evaluated using the Weight of Evidence framework. The researcher valued the opportunity, inherent in this approach, of evaluating existing research in relation to its contribution to the specific context in which FRIENDS is being delivered. This framework was also used to structure the research synthesis. It should be noted that the process was biased by the analysis of a single researcher.

2.6.4 Summary

The search method and inclusion criteria identified 15 studies, 3 of which had associated follow up studies. These were evaluated using a Weight of Evidence framework which considered the quality and reliability of the results, the appropriateness of the research design employed for the research question and the appropriateness of the study focus in answering the evaluation question.

2.7 Research synthesis

2.7.1 Weight of evidence A - What is the quality of the evaluation research?

2.7.1.1 Number and Size of studies

The 15 studies included in this review had participant numbers varying from 3 to 963. In addition a number of studies were excluded. There is a sizeable volume of evidence evaluating FRIENDS. The size of the samples in many of the studies increased the statistical power achievable.

2.7.1.2 Research design quality

One consideration was of the research designs employed in this area. Of the 15 studies considered, 11 (73%) employed a pretest-posttest control group design which enables the effects of history, maturation, testing, instrumentation, and experimental mortality to be controlled (Mertens, 2010). Additionally, 9 of these studies employed random allocation to the intervention or control group (RCT), by class or school, to remove selection bias. Although RCT is often viewed as the 'gold standard' of research design it is difficult to achieve in real world contexts. Only 1 study achieved randomisation at an individual level (Liddle & MacMillan, 2010).

In 8 studies the participants were allocated using a block design where schools, rather than individuals, were randomly assigned to the intervention or monitoring condition (Barrett & Turner, 2001; Barrett et al., 2006; Barrett, Lock, & Farrell, 2005; Bernstein, Layne, Egan, & Tennison, 2005; Essau, Conradt, Sasagawa, & Ollendick, 2012; Lock & Barrett, 2003; Lowry-Webster, Barrett, & Dadds, 2001; Lowry-Webster, Barrett, & Lock, 2003; Miller, Laye-Gindhu, Liu, March, Thordarson, & Garland, 2011a; Pahl & Barrett, 2010). This creates a quasi-experimental design which means that some of the threats to validity, such as differences in pupil socio-economic characteristics between schools, are no longer controlled by randomisation (Robson, 2002). Two smaller studies used quasi-experimental design without random allocation (Mostert & Loxton, 2008; Rose, Miller, & Martinez, 2009). Confidence in the impact of the intervention is therefore reduced in quasi experimental designs as differences between groups may reflect group characteristics and contexts rather than the intervention (Mertens, 2010). To some extent this was managed in the evaluated

studies by using a large sample size across a number of schools. In some cases classes within schools were allocated to different conditions (Lowry-Webster et al., 2001; Lowry-Webster et al., 2003; Pahl & Barrett, 2010) although this process may elevate the risk of diffusion of treatment so reducing internal validity (Robson, 2002).

Three studies employed a one-group pretest-posttest design (Stallard et al., 2007; Stallard et al., 2005; Stopa, Barrett, & Golingi, 2010). Validity threats of this design include the inability to rule out maturation effects, regression to the mean and practice effects (Robson, 2002). Mertens (2010) however, argues that such designs can be justified in situations where you are attempting to change attitudes or beliefs which are unlikely to change incidentally. This assumption was demonstrated to be applicable by Stallard et al. (2007) who found anxiety and self-esteem were stable for six months prior to the intervention. One study (Schoenfeld & Mathur, 2009) employed a single case experimental design (SCED) which employ a methodology which enables interventions to be evaluated within an individual case (Kazdin, 1982).

2.7.1.3 Intervention Fidelity

It is important to encourage and establish intervention fidelity in order to draw conclusions about programme efficacy (Durlak & DuPre, 2008). One aspect of research quality is the use of fidelity checks to ensure that the intervention is used with integrity. Of the 15 studies 8 reported the use of a fidelity check (Barrett & Turner, 2001; Barrett et al., 2005; Lock & Barrett, 2003; Lowry-Webster et al., 2001; Miller et al., 2011a; Mostert & Loxton, 2008; Pahl & Barrett, 2010; Stallard et al., 2005). These ranged from checklists and videotaped sessions to regular contact with researchers. Nearly half of the included studies may not have established the quality of the implementation of FRIENDS limiting the value of their conclusions.

2.7.1.4 Follow up research

One criticism of controlled trials is that it is unusual to find studies which carry out post experiment follow ups, particularly where a wait list design results in the control group receiving the intervention (Torgerson & Torgerson, 2001). However, in this review 7 studies included follow up studies at 12 months (Barrett et al., 2006; Lock & Barrett, 2003; Lowry-Webster et al., 2003; Miller et al., 2011a; Mostert & Loxton, 2008; Pahl &

Barrett, 2010; Stallard et al., 2008; Stopa et al., 2010) and 1 of these also included follow ups at 24 and 36 months (Barrett et al., 2006). This more extended evaluation has resulted in greater certainty in relation to the long term impact of the intervention although ethical issues in the treatment of control groups have arisen (see below). This long term follow up has particular importance in evaluating FRIENDS as a number of studies report no significant improvement in anxiety immediately post intervention but a significant improvement after 3 months (Stallard et al., 2007), 4 months (Mostert & Loxton, 2008) or 12 months (Barrett et al., 2005; Essau et al., 2012; Pahl & Barrett, 2010) .

2.7.1.5 Control Groups

Another aspect to be considered in the quality of the design is the comparability of the control group. 7 of the 11 control group design studies reported on the equivalence of the control group in terms of their initial measures (Barrett & Turner, 2001; Bernstein et al., 2005; Lowry-Webster et al., 2001; Miller et al., 2011a; Mostert & Loxton, 2008; Rose et al., 2009). When not reported this limits the reliability of any difference noted between the intervention and control groups (Robson, 2002).

In the majority of the controlled design studies the control group did not receive an alternative intervention. Instead control groups were monitored whilst on a wait list to receive the intervention. This results in threats to external validity such as the Hawthorne effect (Roethlisberger & Dixon (1939) cited by (Robson, 2002)), which suggests that any changes occur as a result of the attention associated with participation in a study.

The only study offering an alternative intervention was Miller et al. (2011a), who reported two FRIENDS evaluation studies using an attention controlled control group, one targeting children with anxiety symptoms and the other evaluating FRIENDS as a universal intervention for whole classes. Random allocation occurred, by school, into either a FRIENDS intervention or an attention control wait list group who were read an adventure story, Harry Potter (Rowling, 1999). Both groups were run by a trained teacher paired with a trained psychology graduate student. Self-report measures of

anxiety and teachers and parent report measures of behaviour were collected in both studies. In both studies anxiety reduced between pre-intervention and post-intervention measurement in both the intervention and attention control group. No effect of intervention could therefore be identified. Miller et al. (2011a) speculate that the 'power of attention can be therapeutic' and also that inclusion in the reading group may reduce anxiety by giving time for relaxation, allowing children to feel included in a group and providing Harry Potter as a role model thus reducing group differences. These findings raise questions as to the validity of the monitoring wait list controls employed in the other studies and suggest that further research using attention controlled comparison groups is necessary.

2.7.1.6 Ethical Issues

Ethical issues have arisen with the use of the wait list control. For example, Lowry-Webster et al. (2001) initially used a wait list comparison group, planning that the comparison group would receive the intervention after the experimental group. It is apparent from the follow up study (Lowry-Webster et al., 2003) that the control group did not receive the intervention in order to evaluate the longer term impact of the intervention. The same issue arose in research conducted by Lock and Barrett (2003) which formed part of the evaluation of Barrett et al. (2006). As the efficacy of FRIENDS has been demonstrated it is increasingly being viewed as "unethical to deny children the opportunity to participate in an empirically validated anxiety prevention programme" (Stopa et al., 2010, p. 18) for the longer follow up periods of time employed by researchers into the programme. This has contributed to the use of more uncontrolled pre-test, post-test designs (Stopa et al., 2010).

In summary there have been a number of evaluations of FRIENDS which could be considered to be good quality. Control group designs have been used, the research has used large samples, fidelity checks have been made and follow up studies reported. There are, however, some limitations in terms of block allocation designs, ethics and control group treatments.

2.7.2 Weight of Evidence B –How appropriate are these study designs for the research question?

A wide variety of research designs are appropriate to answer broad questions about the impact of FRIENDS. RCTs provide robust information about whether or not the intervention has an impact. However there are criticisms of group designs.

Firstly, identifying the impact of an intervention in a group design relies upon statistical differences between the control and experimental groups. This may not demonstrate practically meaningful improvements for the participants. In a large study a significant difference between groups may be only a small difference on an anxiety measure. An alternative is to consider the clinical significance of the change i.e., the movement of the client from “the dysfunctional to the functional range during the course of therapy” (Jacobson, Follette, & Revenstorf, 1984, p. 340). Of the 15 studies in this review 4 studies reported the percentage of clinically anxious participants who had moved to a normal range of anxiety post intervention (Barrett et al., 2006; Lowry-Webster et al., 2001; Lowry-Webster et al., 2003; Stallard et al., 2005; Stopa et al., 2010). This ranged from 50-79%. Of these studies none indicated the magnitude of change necessary for such a shift, particularly in relation to the reliability of the measure employed. It is possible that the shift could reflect test-retest reliability of the measure rather than the impact of the intervention. Methods such as the Reliable Change Index (RCI) (Jacobson & Truax, 1991) can reveal whether the differences are statistically and meaningfully significant and may offer an alternative method of evaluating therapeutic interventions.

Secondly, a criticism of any group design study is that group results mask variability in response to the intervention between participants so, by studying the impact of the intervention on a group any contextual factors regarding who responds best to the intervention, and in what circumstances, is lost (Jacobson & Truax, 1991; Kazdin & Nock, 2003; Thomas, 2011; Wise, 2004). This is a broader purpose than just considering ‘what works’. Although it is important for individuals, such as EPs, to have knowledge about interventions effective at the statistical level, the generalisation of a summary of large RCT projects to a small, specific setting may be problematic. It is

important to be aware of what is unknown or imperfectly researched, and what has potential to work, even if the research evidence is not yet established, and needs further evaluation.

In particular, research often shows the impact of an intervention under ideal or special conditions rather than in everyday life (Kazdin & Nock, 2003). Small scale service evaluations, not employing group designs, may be excluded from reviews (Evans & Benefield, 2001). Information about whether an intervention works in an everyday real world setting is then lost despite this being the type of setting which is most likely to adopt the intervention. There are very few real world evaluations of FRIENDS published with only one case study included within this review (Schoenfeld & Mathur, 2009).

An additional purpose of a systematic review is to “ identify where the gaps are in the field and/or where the methodological shortcomings are” (Andrews, 2005, p. 409). In the current review it is argued that the study designs in the papers reviewed have limitations in terms of understanding the likely impact of FRIENDS in the current research context. It would be useful to undertake and publish more small scale real world evaluations of effectiveness, whilst acknowledging their limitations, particularly in this instance where there are already more rigorous random controlled trial (RCT) studies indicating programme efficacy.

2.7.3 Weight of Evidence C – How appropriate is the focus of the included research for answering the review question?

The inclusion criteria employed and the broad research question of ‘What impact does the FRIENDS for life programme have on children and young people?’ means that all of the papers reviewed have a focus appropriate for answering the review question. However, none of the papers alone is sufficient to answer the question as all focus on particular contexts, participants, methods of delivery and outcomes as will be described below. The studies with the greatest bearing on the current study will be reported more fully.

2.7.3.1 Contexts

The inclusion criteria employed limited the research to those studies where the FRIENDS programme was delivered within a school setting, as in the local TAMHS project. Six (40%) of the studies were undertaken in Brisbane, Australia (Barrett & Turner, 2001; Barrett et al., 2006; Barrett et al., 2005; Lock & Barrett, 2003; Lowry-Webster et al., 2001; Lowry-Webster et al., 2003; Pahl & Barrett, 2010; Stopa et al., 2010) , two in the United States (Bernstein et al., 2005; Schoenfeld & Mathur, 2009), two in Canada (Miller et al., 2011a; Rose et al., 2009) and one in each of Germany (Essau et al., 2012) and South Africa (Mostert & Loxton, 2008). Three of the included studies were undertaken in the UK (Liddle & MacMillan, 2010; Stallard et al., 2008; Stallard et al., 2007; Stallard et al., 2005) . The extent to which the findings of studies undertaken outside of the UK can be applied in the UK context has been questioned by Stallard (2010) who noted that the Australian studies often occurred in independent, rather than state funded, schools and that the studies tend to be undertaken under tightly controlled conditions with high levels of training and supervision by the creators of the programme.

UK studies have reported that FRIENDS is effective, although control groups were not used in two of the studies. Stallard has undertaken a number of evaluations of the FRIENDS programme within a UK context (Stallard et al., 2008; Stallard et al., 2007; Stallard et al., 2005). Using a one-group pretest-posttest design, Stallard et al. (2005) reported that a sample of nine to ten year old children in Southwest England who received the FRIENDS intervention delivered by a school nurse showed a significant reduction in levels of anxiety and significant improvement in levels of self-esteem. Stallard concluded that the results were consistent with those found in Australia although he measured anxiety and self-esteem rather than anxiety and depressive symptoms. These conclusions are limited by a small sample size, lack of a control group and heavy reliance on self-report measures with no additional triangulation. The studies do, however, offer a more real world evaluation as they are based upon a more sustainable model of disseminating FRIENDS.

In a second UK study, which included monitoring for 6 months prior to the intervention and a 12 month follow up (Stallard et al., 2008; Stallard et al., 2007), the same intervention implementation and measures were employed. Again the study reported a significant reduction in anxiety after the intervention which was maintained at the 12 month follow up. There was also an increase in self-esteem between initial measures being taken and the 12 month follow up although not in the high risk group (who had baseline scores on the SCAS above 54). Again any conclusions are limited by the lack of a control group, reliance on self-report measures with no triangulation and the small sample size (106 children of whom only 59% were available at the 12 month follow up).

Another UK study by Liddle and MacMillan (2010), described later, also reported a decrease in anxiety and depression and an increase in self-esteem and social skills following the intervention.

2.7.3.2 Delivery

Four of the included research studies reported on the intervention as delivered by teachers trained in the FRIENDS programme (Lowry-Webster et al., 2001; Lowry-Webster et al., 2003; Miller et al., 2011a; Pahl & Barrett, 2010; Stopa et al., 2010). The remainder evaluated the intervention delivered by school nurses (Stallard et al., 2008; Stallard et al., 2007; Stallard et al., 2005) or by professionals from outside of the school with a psychology background (Barrett et al., 2005; Bernstein et al., 2005; Essau et al., 2012; Liddle & MacMillan, 2010; Schoenfeld & Mathur, 2009). Two studies did not report who had delivered the intervention (Mostert & Loxton, 2008; Rose et al., 2009) and one study used a variety of delivery contexts (Barrett & Turner, 2001) to analyse whether the efficacy of the intervention is affected by who delivers the programme. One study and its follow up had contradictory accounts of who had delivered the intervention (Barrett et al., 2006; Lock & Barrett, 2003).

Barrett and Turner (2001) measured the impact of the FRIENDS intervention on anxiety and depression when delivered to 9-10 year old children by psychologists or teachers compared to a monitoring control group. The teachers were trained in delivering FRIENDS on a one day course. All children who received the intervention showed a

reduction in anxiety whereas the control group showed no change. With regard to depression the teacher implemented group had a statistically significant rise in depression scores (although this was below clinical levels) whilst there was a reduction in the psychologist led and control groups. For children identified as at risk of anxiety, by their pre-intervention scores, greater numbers remained at risk, and more children identified as no risk pre-intervention became at risk for teacher- led than psychologist-led groups. However the size of the sample resulted in a lack of statistical power to provide more conclusive analysis. There is a need for replication of this research with greater sample size in order to clarify the impact of different implementation of the programme.

Of the other three studies evaluating the impact of FRIENDS when delivered by trained teachers, two reported a reduction in anxiety post intervention in comparison to a control group (Lowry-Webster et al., 2001; Lowry-Webster et al., 2003; Pahl & Barrett, 2010). The other study reported no significant reduction in anxiety relative to an attention controlled comparison group although the authors attribute this to the methodology rather than programme implementation (Miller et al., 2011a). These results suggest that FRIENDS can be effective when delivered by school staff although it is unclear if the intervention will be delivered as effectively as by trained psychologists. It should also be noted that the programme authors were involved in the research evaluating FRIENDS as being effectively delivered by teachers. This may have resulted in high levels of expert support and demands of rigorous fidelity checks which are likely to have improved programme integrity to a level above that which would be achieved in an unsupported school setting after a one day training session in the programme. These results indicate that FRIENDS can be successfully delivered by school staff but further research is necessary to identify the features and context of successful implementation of the programme by this method.

Another aspect of the delivery was whether the intervention was delivered to small groups or whole classes. In 12 of the 15 studies the intervention was delivered to whole class groups. In one of these studies there was an additional small group delivery of the intervention (Miller et al., 2011a) and in two studies children only

participated in small groups (Bernstein et al., 2005; Essau et al., 2012). One study delivered the intervention on an individual basis (Schoenfeld & Mathur, 2009). The way in which FRIENDS was delivered appears to be related to whether the intervention was delivered universally, to all children, or targeted towards those identified as having higher levels of anxiety. Whereas targeted interventions tend to be delivered to small groups, only one universal intervention was delivered in small groups (Essau et al., 2012). The results of studies involving universal and targeted children may not be comparable due to the differing characteristics of the participants.

2.7.3.3 Participation Selection

Three studies reported targeted interventions. The way in which children were selected for targeted intervention varied. Schoenfeld and Mathur (2009) evaluated the intervention delivered on an individual basis to children identified as having elevated levels of anxiety on a school administered psychology measure whilst Miller et al. (2011a) evaluated FRIENDS delivered in small groups to children identified by an elevated score on the Multidimensional Anxiety Scale for Children (March, Parker, Sullivan, Stallings, & Conners, 1997) or by a parent or teacher indicating anxiety on a brief checklist of anxiety symptoms. Liddle and MacMillan (2010) evaluated FRIENDS delivered to small groups of children selected for 'indicated prevention' i.e., they were identified by their teachers as having some signs of 'anxiety, low mood or low self-esteem'.

Liddle and MacMillan (2010) evaluated FRIENDS using a randomised wait list control trial design. The measures used collected information on anxiety, self-esteem, depression and social skills using both self-report and associated parent and teacher rating scales. Children were allocated randomly to one of two groups in their school. One group received the intervention whilst the other group acted as a control before receiving the intervention themselves. The intervention was delivered by educational psychologists. They found that, for children in the wait list condition, the measures remained stable in the four months prior to receiving the intervention, although teacher ratings of social skills showed significant improvement perhaps due to treatment diffusion. During the same period of time the intervention group showed

positive change in all measures. Post intervention both groups showed a sustained drop in anxiety and sustained improvement in mood and self-esteem. Social skills scores also improved post intervention although this was not maintained. This study suggests that targeting children for indicated prevention, with FRIENDS implemented in a small group, has a positive impact on all measures although the participant number was small, limiting the reliability of the conclusions.

Although only three studies evaluated FRIENDS delivered to targeted individuals, a number of other studies reported the impact of FRIENDS on children with different risk levels of anxiety and/or depression as shown by their pre intervention measures data. FRIENDS was found to have greater impact on children at greater risk although this may reflect floor effects of the measures employed.

2.7.3.4 Participant age

The studies included participants of an age range from 4-16 years (See Figure 2-1). The majority of the studies evaluated children of UK Key Stage 2 (age 7-11 years). 8 studies evaluated the intervention only with children within this key stage whilst a further 5 studies included children up to 13 years, perhaps reflecting international differences in school phases. 1 study included children up to the age of 14 whilst 2 studies compared the intervention for children aged 9-10 with children aged 14-16.

Lock and Barrett (2003) and Barrett et al. (2006) used block allocated RCTs to compare the effectiveness of FRIENDS in reducing anxiety and depression and changing coping style in Grade 6 and Grade 9 children. They reported that there was a significant reduction in anxiety in the intervention group post-intervention and at 12 months. Younger children appeared to respond better to the intervention with higher levels of anxiety prior to and post the intervention but greater reductions at 12 months follow up than older children. The significant intervention and control group differences of year 6 pupils were maintained at 12, 24 and 36 month follow-up but there were no significant group differences for year 9 pupils. This lead to the conclusion that late childhood may be the optimum time for completing FRIENDS.

AGE IN YEARS	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
STUDY															
Barrett & Turner 2001															
Lowry-Webster, Barrett, & Dadds 2001 Lowry-Webster, Barrett, & Lock 2003															
Lock & Barrett, 2003 Barrett, Farrell, Ollendick, & Dadds, 2006															
Stallard, Simpson, Carter, Osborn, & Bush 2005															
Bernstein, Layne, Egan, & Tennison 2005															
Barrett, Lock, & Farrell, 2005															
Stallard, Simpson, Anderson, Hibbert, & Osborn 2007 Stallard, Simpson, Anderson, & Goddard 2008															
Mostert & Loxton, 2008															
Rose, Miller, & Martinez 2009															
Schoenfeld, 2009															
Stopa, Barrett, & Golingi 2010															
Pahl & Barrett 2010															
Liddle, 2010															
Miller, Laye-Gindhu, Liu, March, Thordarson, & Garland 2011															
Essau, Conradt, Sasagawa, & Ollendick, 2012															

Figure 2-1 The Age Range of the participants in the reviewed studies

Shaded areas represent the age of the participants in the study

Barrett et al. (2005) in a similar study found significant reductions in anxiety, relative to pre-intervention only at 12 month follow up. The study also reports that children in grade 6 reported higher levels of anxiety than children in year 9 and also greater reductions in anxiety and depression over time.

Both of these studies appear to indicate that late childhood (9-11) years is the best time to deliver the intervention and this is reflected by the greater number of studies focusing upon this narrow age group. There is a need for more studies which evaluate the intervention with other age groups although it should be noted that the lack of studies may reflect the 'file-drawer problem' i.e. the tendency of studies with non-significant findings to remain unpublished (Slavin, 1995, p. 9).

2.7.3.5 Outcome Measures

A range of outcome measures were used (see figure 2-2).

All of the studies evaluated measured anxiety. The most commonly used measure was the Spence Children's Anxiety Scale (Spence, 1999) used by 60% of the studies, although another four anxiety rating scales were used. The most commonly used measure of depression was the Child Depression Inventory (Kovacs, 1985) used in 46% of studies.

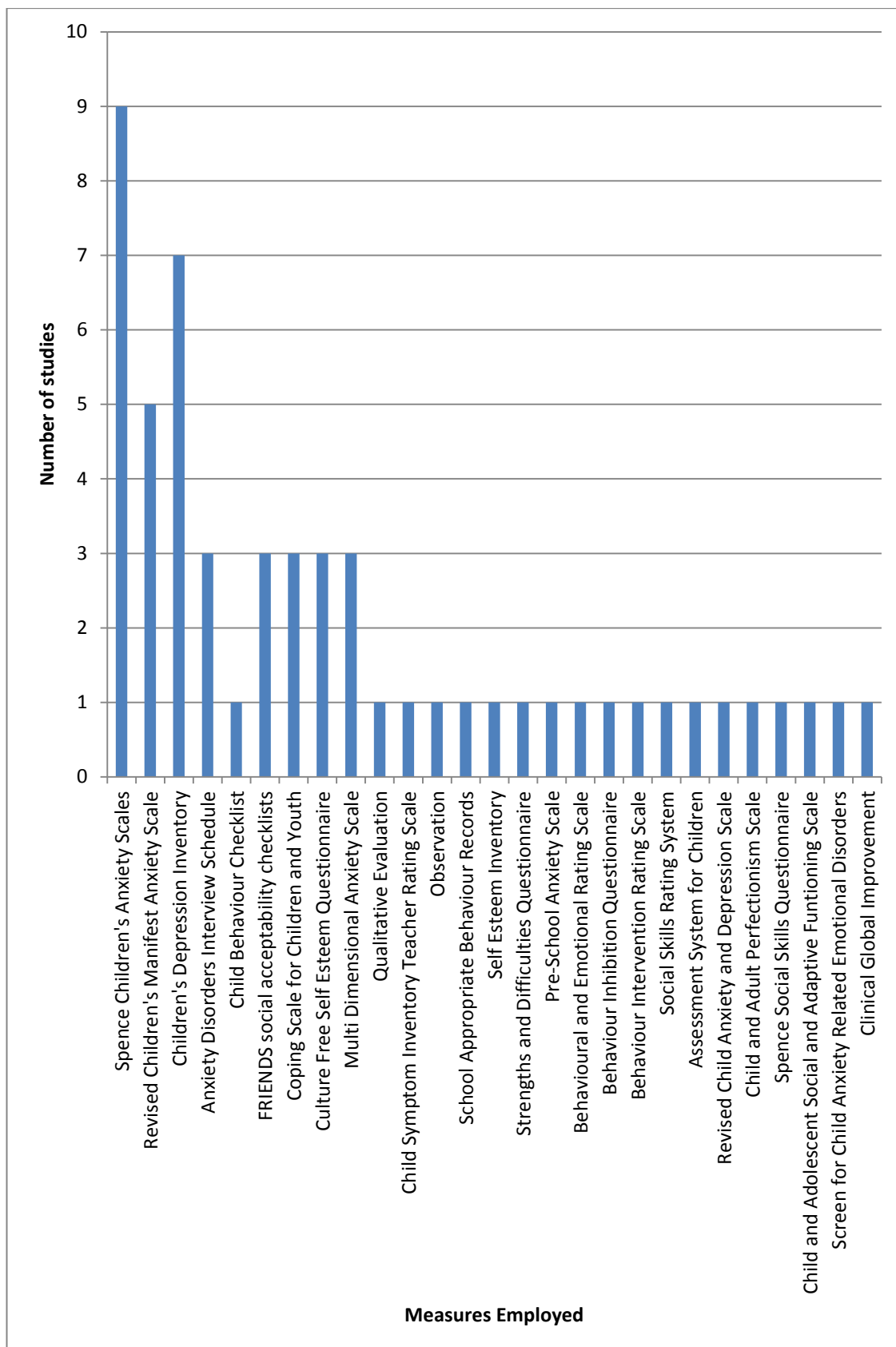


Figure 2-2 Bar Graph showing Measures used in the reviewed studies

All of the studies were heavily dependent upon rating scales and self-report questionnaires. These are useful methods of collecting data quickly and have usually been extensively tested to allow their reliability and validity to be assessed and reported. The disadvantage of such methods is that they are vulnerable to production of socially desirable responses, perhaps particularly in children with anxiety disorders (Dadds, Perrin, & Yule, 1998). To improve reliability the studies typically used several measures and increased triangulation by using teacher and parent reports as well as child reports. Three studies used a clinical interview in addition to self-report measures (Bernstein et al., 2005; Lock & Barrett, 2003; Lowry-Webster et al., 2001; Lowry-Webster et al., 2003) whilst one study included observation of class room behaviour (Schoenfeld & Mathur, 2009).

In this study, Schoenfeld and Mathur (2009) used a multiple baseline single case experimental design to evaluate the impact of FRIENDS on the anxiety levels, academic engagement and school appropriate behaviour of three 11-12 year old children attending a school for children with emotional and behavioural difficulties. Academic engagement was measured using observation of academic engagement during daily maths lessons whilst school appropriate behaviour was measured using a behaviour recording system already operating within the school. The authors concluded that improvements were shown in all three measures although replication is desirable and necessary in studies of this design in order to strengthen conclusions.

Although the addition of observational measures to the evaluation of FRIENDS is informative it should be noted that this approach is very time consuming and probably would be difficult to achieve in large studies. It is also open to threats of observer bias such as selective attention, selective encoding, selective memory and interpersonal factors (Robson, 2002).

2.7.3.6 Mechanisms of change

Mechanisms of change are the mediators which cause therapeutic change i.e., reduction in anxiety (Kazdin & Nock, 2003). Of the measures employed in the studies analysed very few measured the mechanisms which are addressed by the FRIENDS intervention in order to reduce anxiety. These include resilience, coping skills, problem solving and appraisal.

Aspects of resilience thought to impact on anxiety include self-esteem, coping skills and friendships (Gilligan, 1997). There was no direct measurement of resilience or friendship in any of the studies. The construct of coping was measured using the Coping Scale for Children and Youth (Brodzinsky, Elias, Steiger, Simon, Gill, & Clarke Hitt, 1992) in three studies (Essau et al., 2012; Lock & Barrett, 2003; Stopa et al., 2010).

Stopa et al. (2010) evaluated FRIENDS delivered by class teachers to children aged 10-13 years in socio-economically disadvantaged communities. Overall, anxiety was reduced post intervention and at 12 month follow up. The study also evaluated coping skills. The hypothesis that cognitive and behavioural avoidance as coping skills would decrease was supported as both decreased post-intervention and again by 12 month follows up. However, cognitive-behavioural problem solving also decreased significantly in the 12 months post-intervention and there was no change in assistance seeking. This suggests that the FRIENDS intervention had limited impact upon coping skills although this may reflect the nature of the issues that participants were coping with which is not reported. This study also had no control group with which to compare these changes.

Essau et al. (2012) similarly measured coping styles of 9-12 year old children participating in the FRIENDS intervention, delivered by psychologists, in Germany. They reported that participants in the intervention group used less cognitive avoidant problem solving than those in the control group at 6 and 12 month follow-up although again there was no improvement in proactive coping strategies.

Lock and Barrett (2003) also evaluated coping styles, reporting that post intervention there was an increase in cognitive behavioural problem solving strategies in girls and year 9 students and decreased cognitive behavioural avoidance in year 6 students.

Year 6 boys and year 9 girls also reported less cognitive and behavioural avoidance strategies post intervention than in the monitoring group. These changes were no longer apparent at 12 month follow up.

These studies imply that cognitive behavioural problem solving strategies are better coping skills than cognitive avoidance. However, as has previously been discussed, coping skills can only be evaluated in relation to the problem.

Overall the studies appear to indicate that participation in FRIENDS reduces avoidant coping strategies. It also has either no impact or a negative impact on problem solving strategies that might have been expected to improve. However, it is difficult to identify if coping strategies have been improved by the FRIENDS programme without more information about what the context of the coping behaviour is.

Four studies took measurements of self-esteem (Liddle & MacMillan, 2010; Stallard et al., 2007; Stallard et al., 2005; Stopa et al., 2010). All of these studies reported an increase in self-esteem post intervention and / or at 12 month follow up. In none of these studies is it apparent how self-esteem is being defined and the mechanisms through which it is related to anxiety.

The limited amount, and inconclusive nature, of research into the impact of FRIENDS on the factors underpinning anxiety suggests that the way in which the FRIENDS programme impacts upon anxiety is still unclear and needs further research. Lock and Barrett (2003) conclude that "Further research examining the effects of the self-esteem, relaxation and cognitive restructuring components of the intervention ... would provide further support for the FRIENDS programme"(p197). Kazdin and Nock (2003) state that RCTs alone do not uncover mechanisms as it is necessary to monitor response during interventions to see if change in the proposed mechanism occurs before change in the outcome.

This section of the review has shown that the included research is appropriate for the research question and has indicated the impact of FRIENDS in a variety of contexts and delivery styles, at a range of ages and employing a wide range of outcome measures.

Gaps have been identified in the ages, methods of delivery and mechanisms of change studied.

2.7.4 Overall Summary of Findings

This review sought to answer the following question

- What impact does the FRIENDS for Life programme have on young people attending a mainstream secondary school receiving the intervention delivered by school staff?

FRIENDS appears to reduce anxiety and depression at all developmental stages and when undertaken as both a targeted and a universal intervention. It also appears effective internationally and when delivered by both teachers and clinically trained professionals. All studies except one reported that the intervention led to a reduction in anxiety either post intervention or at a follow up point a few months later. In addition there is evidence that the intervention leads to a reduction in depression and that it may raise self-esteem.

2.7.5 Identification of Future Research

During this review a number of issues have been raised which suggest a need for future research. In particular it was noted that the majority of the research uses RCTs and group experimental designs. Whilst there are many advantages of group designs such designs may be criticised for failing to demonstrate that an intervention results in a clinically significant change for the child and how the intervention works (Pawson & Tilley, 1997). In reality many variables will affect the outcome of an intervention for an individual child. Alternative approaches such as case study methodologies may reveal the circumstances in which interventions are more or less effective as well as the processes which occur during the intervention (Yin, 2009).

The mechanisms through which the intervention reduces emotional distress are also unclear. More research is required to focus on some of the components of the programme such as the underlying constructs of resilience and coping skills which the programme seeks to address.

Research has also focused upon a narrow age range of children of upper Key Stage 2 age despite the programme being marketed as suitable for children from 4 to 17 years old. Further research is also required to fully evaluate the intervention for more age groups.

Similarly the programme has been evaluated with implementation in different ways. It would be useful to assess the efficacy of the programme when delivered by school staff rather than psychologists. Such 'effectiveness trials' reveal the potential impact likely upon adoption in real world, rather than in 'optimal', implementation conditions (Dane & Schneider, 1998). Research has also focused mainly on universal delivery to whole classes rather small group delivery to children identified by school staff as anxious.

2.8 Introduction to the Research Evaluation of Friends

2.8.1 Rationale for the focus of the research

A number of gaps in the literature and future research questions were identified in the literature review. These included recognition that there has been limited research into contexts where the intervention is delivered by school staff, who had received only brief training in facilitating the programme, in real world settings. Most studies have used statistical significance, rather than clinical significance, as a measure of the impact of the programme and no published studies have considered the features of the context which support or hinder successful programme delivery. These were used to guide this research evaluation of FRIENDS.

The current study addressed the need to develop a real world understanding of the implementation and impact of FRIENDS in particular contexts by evaluating FRIENDS *as delivered by trained school staff to small groups of children identified as being at risk of anxiety*. By using an alternative methodology, which used single case experimental design to evaluate the impact of FRIENDS, delivered through TAMHS, upon the anxiety, emotional distress, and coping skills of individuals, and considering a case study of implementation, a more detailed understanding of the impact of the intervention in a 'real world' context could be achieved than has been possible in group design research. In addition the responses of the individual participants to the programme could be recorded.

The majority of evaluations have occurred in Key Stage 2. This evaluation addressed another gap in the literature by evaluating the programme in secondary schools.

In order to consider the mechanisms contributing towards the reduction of emotional distress, this study measured coping skills, which may contribute towards emotional distress and have been identified as more amenable to change than resilience (Lazarus, 1999).

2.9 Research Questions

The key research questions identified were:

- How has FRIENDS been implemented in a mainstream secondary school participating in a local authority TAMHS project?
- Does FRIENDS, as implemented in a mainstream secondary school participating in a local authority TAMHS project, reduce emotional distress and anxiety in secondary aged children identified by school staff as being anxious?
- Does FRIENDS, as implemented in a mainstream secondary school participating in a local authority TAMHS project, change the coping skills of secondary aged children identified by school staff as being anxious?

Methodology

3 METHODOLOGY

Following the review of the literature and consideration of the local context three research questions were identified.

This chapter will outline and explain the choice of research methodology and design and detail the methods used to investigate the identified research questions.

The chapter will begin by considering the variety of philosophical assumptions underpinning different approaches to research, with their associated methodological choices, before presenting the stance underpinning this study. Alternative methodologies and the rationale for the methodology employed in this study will then be outlined. The next section will summarise how the study contributes to, and is influenced by, the socio-political landscape it resides in. The final section will provide the details of the methods of data collection together with consideration of reliability, validity and ethical issues.

3.1 Philosophical Assumptions and Stances

This section will outline what is meant by philosophical assumptions and stances, describe the dominant paradigms in social science research and then explain the paradigm within which this current research is situated.

3.1.2 Different Paradigms

The term 'Paradigm' was originally used by Kuhn in 1946 to describe the norms, traditions, philosophical assumptions and stances inherent, often implicitly, in particular approaches to science (Kuhn, 2012). Morgan (2007) concluded that paradigms are "shared belief systems that influence the kind of knowledge researchers seek and how they interpret the evidence they collect" (p50). Guba and Lincoln (1994) suggest that the beliefs associated with a particular paradigm can be revealed by answers to three questions (See table 3:1). These questions are closely linked; the answer to one question will limit possible answers to another.

The focus on underlying beliefs reflects the recent influence on social science, of a 'Metaphysical Paradigm'. This paradigm emphasises that research should be conducted with explicit consideration of ontology, epistemology and methodology, with a claim that methodological problems could be solved by "an ontology driven version of the philosophy of knowledge" (Morgan, 2007, p. 64).

Belief	Key Question	Paradigm differences
Ontology	What is the nature of reality and what can be known about it?	Reality can be viewed in different ways. Social Constructionism argues that there is “no such thing as an objective fact”(Burr, 2003, p. 6) and that all knowledge is constructed from different viewpoints for different purposes. An alternative, positivist, viewpoint states that there is a ‘real’ world which can be objectively observed and described and other issues of aesthetics and morals cannot be scientifically researched (Guba & Lincoln, 1994).
Epistemology	What is the nature of the relationship between the researcher and the knowledge?	A positivist viewpoint is that the researcher takes an objective, value free position to find out about the way things ‘really’ happen in the world. An alternative, constructionist position is that any researcher’s view will be a value laden, subjective experience, one of multiple realities experienced by different individuals.
Methodology	How can the researcher gather data about what they believe can be known?	The type of data collected, qualitative or quantitative, and the methods used to collect the data will reflect issues of ontology and epistemology. Particular paradigmatic standpoints determine what sort of information is considered valid. The methods chosen for a piece of research should employ the methodology accepted by the paradigm within which the research is based. Researchers in the constructivist paradigm use qualitative methods such as interviews and observations whilst those in the post positivist paradigm would aspire to RCT experimental design (Mertens, 2010).

Table 3:1 The key questions revealing paradigm difference (Guba & Lincoln, 1994)

3.1.3 The Dominant Paradigms in Psychology and Education

Between education and psychology the dominant paradigms differ. Alise and Teddlie (2010) surveyed the methodological prevalence in published research in areas including psychology and education reporting the differences shown below (table 3:2).

	Published Psychology Research	Published Education Research
Paradigm Used	95% Post Positivism 5% Pragmatism	46% Post Positivism 19% Pragmatic 5% Critical or Transformative 30% Constructivist
Methods Used	93% Quantitative 7% Mixed Methods	42% Quantitative 34% Qualitative 24% Mixed Methods

Table 3:2 The proportions of different paradigms and methods employed in published psychology and education research (Alise & Teddlie, 2010)

These results should be treated with caution as they reflect a relatively small sample of all the research undertaken and published, as well as a bias towards the publication of quantitative studies in psychology. In addition to selecting paradigms on the basis of ontology, EPs also have to decide whether to embrace the gold standard of post positivistic Random Controlled Trials (RCT), adopted by psychology, or whether to align themselves with education where good quality research has arguably yet to be defined (Fox, 2003).

It is apparent is that three paradigms, post positivism, pragmatism and constructivism dominate published research across *both* disciplines. These are summarised in table 3:3.

Dimension of Contrast	Post Positivism	Constructivism	Pragmatism
Ontology	One reality. This is knowable but it is understood that this knowledge will be imperfect and probabilistic	Multiple socially constructed realities coexist	Individuals have individual viewpoints and interpretations of a single reality
Epistemology	Objectivity is maintained with the researcher attempting to manipulate and observe in a dispassionate manner	A subjective point of view is taken and reality is co-constructed with participants. Values are made explicit	Both objective and subjective points of view may be used depending upon the purpose addressed by the researcher and the stage of the research cycle
Methodology	Primarily quantitative methods	Qualitative methods	Both quantitative and qualitative as the researcher matches methods to that particular study
Logic	Hypothetico—deductive	Inductive	Both Hypothetico—deductive and Inductive
Axiology	Inquiry is value free	Inquiry is value bound	The values of the researcher will be important in the interpretation of results

Table 3:3 A comparison between the dominant paradigms in the fields of psychology and education (Mertens, 2010; Teddlie & Tashakkori, 2009, p. 88)

There has been considerable debate between research communities regarding which is the most valid approach to use. Feilzer (2010) identifies the main opposing paradigms as positivism / post positivism and constructivism / interpretivism which are, simplistically, divided by their different views of reality (ontology) which are reflected in the use of quantitative methods by the former and qualitative methods by the latter. Qualitative and quantitative methods have been presented as a dichotomy (referred to as the 'Paradigm Wars' (Gage, 1989)). The 'incompatibility thesis' asserts that it is inappropriate to combine these methods due to differences in the ontology and epistemology of the paradigms from which they emerge (Sale, Lohfeld, & Brazil, 2002).

3.1.4 The Pragmatic Paradigm

The pragmatic paradigm offers an alternative to the paradigm wars with its acceptance of a 'compatibility thesis' (Feilzer, 2010). Pragmatism rejects, and offers an alternative to, the dichotomies of the positivism and constructivism paradigms and the quantitative and qualitative methodologies (Feilzer, 2010; Tashakkori & Teddlie, 2010). In pragmatism researchers can select from a "continua of options that stretch across both methodological and philosophical dimensions" (Tashakkori & Teddlie, 2010, p. 274) with the appropriate choice being that which best provides the information required to answer the research question. Pragmatism therefore supports the use of mixed methods (Howe, 1988).

Mixed methods have been defined as "research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study" (Tashakkori & Cresswell (2007) cited by (Mertens, 2010) p.293). In addition pragmatism does "not expect to find unvarying causal links or truth" and instead commits to uncertainty (Feilzer, 2010, p. 13).

3.1.5 The Rationale for the Philosophical Basis of this study

The current study is situated in the pragmatic paradigm. This decision is influenced by the limitations of previous research evaluating FRIENDS, which has been primarily researched from a post-positivist perspective employing quantitative methods. The extent of previous research renders further replication of this research as a low priority. Additionally, quantitative evaluation of the TAMHS project is planned.

The limitations of previous post positivist, quantitative evaluations, as noted in the literature review section, include lesser ability to describe the context and process which result in change. This study aims to explore these issues. A pragmatic, mixed methods approach allows for previously unanswered questions to be addressed and presents an opportunity for a unique contribution to the field to be made.

3.2 Inquiry Logic or Methodology

Within the pragmatic paradigm researchers select topics based upon their own values and beliefs about what is important. They then research the area “in a way that is congruent with their value system, including units of analysis and variables that they feel are most likely to yield interesting responses” (Teddlie & Tashakkori, 2009, p. 90).

The literature review chapter revealed some areas which the researcher felt were interesting and would benefit from future research. These included in particular the implementation and impact of the programme in the particular context of delivery by teachers and learning mentors trained through a TAMHS project. Additionally the methodology employed may allow some consideration of the underlying mechanisms thought to reduce emotional distress and targeted by FRIENDS such as Coping Skills.

Therefore the key research questions identified were:

- How was FRIENDS implemented in a mainstream secondary school participating in a local authority TAMHS project?
- Does FRIENDS, as implemented in a mainstream secondary school participating in a local authority TAMHS project, reduce emotional distress and anxiety in secondary aged children identified by school staff as being anxious?
- Does FRIENDS, as implemented in a mainstream secondary school participating in a local authority TAMHS project, change the coping skills of secondary aged children identified by school staff as being anxious?

3.2.1 Research purpose

3.2.1.1 Real World Research

Real world research is described by (Robson, 2002) as research into 'real life' contexts rather than research carried out in purpose built laboratories. Research in real world settings has great ecological validity but can be "complex, relatively poorly controlled and generally 'messy'" (Robson, 2002, p. 4). Another feature of real world research is that real world researchers often intend that their research should make a difference to the community they are working with (Robson, 2002).

This evaluation of FRIENDS fits the description of real world research and also has similarities with additional purposes such as evaluation research and implementation research.

3.2.1.2 Evaluation Research

Evaluation research has the "fundamental purpose of making judgements about the merit and worth of programmes and policy" (Rallis & Rossman, 2003, p. 493). Any of the major paradigms can frame evaluation research (Mertens, 2010) and in terms of design, data collection and methods of analysis it is "essentially indistinguishable from other research" (Robson, 2002, p. 204). However, the terms *merit* and *worth* suggest evaluation not only of the efficacy of a particular intervention but also its value as implemented in particular contexts.

Although there is an evaluation aspect of the current study the small scale nature of the study means that generalisations about the *merit* and *worth* of the programme cannot be made.

3.2.1.3 Implementation Research

Domitrovich and Greenberg (2000) suggest that there are five aims of conducting implementation research (see table 3:4).

Aims of implementation research	
1.	To understand what happened in the intervention trial in order to explain variations in observed changes in outcomes.
2.	To establish implementation quality in order to evaluate programme efficacy and in addition to ensure that a control group has not been exposed to the programme thus undermining the research design.
3.	To understand the dynamics and operations of the programme i.e. how the pieces of the programme fit together, how the users of the programme interact and the obstacles they face and resolve.
4.	To enable on going feedback in order to improve quality.
5.	To advance knowledge on replicating, maintaining and diffusing programmes in real world settings.

Table 3:4 The aims of implementation research (Domitrovich & Greenberg, 2000, p. 197)

It has been established that greater impact, and a better outcome, is related to the effective implementation of programmes (Durlak & DuPre, 2008). It is particularly important to record integrity in situations where interventions are evaluated in naturalistic situations using the resources available i.e., real world settings, rather than optimally implemented situations as are often found in efficacy trials (Dane & Schneider, 1998). This enables shortcomings in the implementation of a programme to be identified and related to the outcomes.

Some of the above aims are applicable in the current study including consideration of: how the context impacts upon programme delivery (aim3); how to improve the quality of implementation (aim 4) and how to improve knowledge on the replication, maintenance and diffusion of programmes in real world settings (aim 5). Additionally the extension of previous research by considering different contexts (aim 1) is applicable.

3.2.1.4 Naturalistic inquiry

A naturalistic inquiry aims to reveal the nature of the phenomena under study (Athens, 2010) and “to develop shared constructions that illuminate a particular context and provide hypotheses for the investigation of others”(Erlandson, 1993, p. 45) . This approach falls within the constructivist paradigm. Lincoln and Guba (1985) identified a number of features of naturalistic inquiry including noting that the study is carried out in the natural context of the focus of study reflecting an ontological view that realities are wholes which cannot be

understood outside of their contexts of fragmented for separate study of the parts. This suggests that FRIENDS should be evaluated within the context it will be used in. In terms of this research, as the focus of the evaluation is FRIENDS *as delivered through the local TAMHS project*. The researcher felt that it was important to study what occurred within the context and to avoid additional intervention to maintain programme fidelity.

3.2.2 Research methodology

As discussed in section 3.1 different ontological and epistemological stances result in different conceptions of social reality and different approaches to gathering data and interpreting information (Cohen & Manion, 1994).

3.2.2.1 Quantitative Methods

Quantitative methods are concerned with collecting data which is then quantified in some way and analysed using statistical techniques. Data from individuals is often aggregated and the probability of observed patterns occurring is important in drawing conclusions.

3.2.2.2 Qualitative Methods

Qualitative research methods tend to have a basis in the constructivist / interpretative paradigm. As such they focus on exploring situations, using inductive logic to develop theory, and on describing shared understandings of the world (Mertens, 2010).

3.2.2.3 Mixed Method Designs

A mixed method design “is the systematic combination of qualitative and quantitative methods”(Chen, 2006). Mixed method approaches are useful when research questions “simultaneously ask confirmatory and exploratory questions and therefore verify and generate theory in the same study” (Teddlie & Tashakkori, 2009, p. 26). The purpose of combining methods is either to provide triangulation of data, to use the strengths of each method to compensate for weaknesses in the other approach or for an ‘expansion intent’ in which an evaluation study employs mixed methods in order to “extend the scope, breadth and range of enquiry” (Greene, Caracelli, & Graham, 1989, p. 269).

3.2.3 Rationale for the approach used in this study

Within the pragmatic paradigm the research method should be chosen which best answers the research question (Mertens, 2010). In this research the research questions reflect both evaluative and exploratory goals. It is therefore appropriate to use mixed methods.

This research consists of a mixed methods case study, of the implementation of FRIENDS within a school, which includes, embedded within it, five SCED studies evaluating the impact of the programme on the levels of emotional distress and coping skills of five young people (see Creswell and Plano Clark (2011); Teddlie and Tashakkori (2009); Yin (2009) for further discussion of embedded designs). This can be represented diagrammatically (see Figure 3-1).

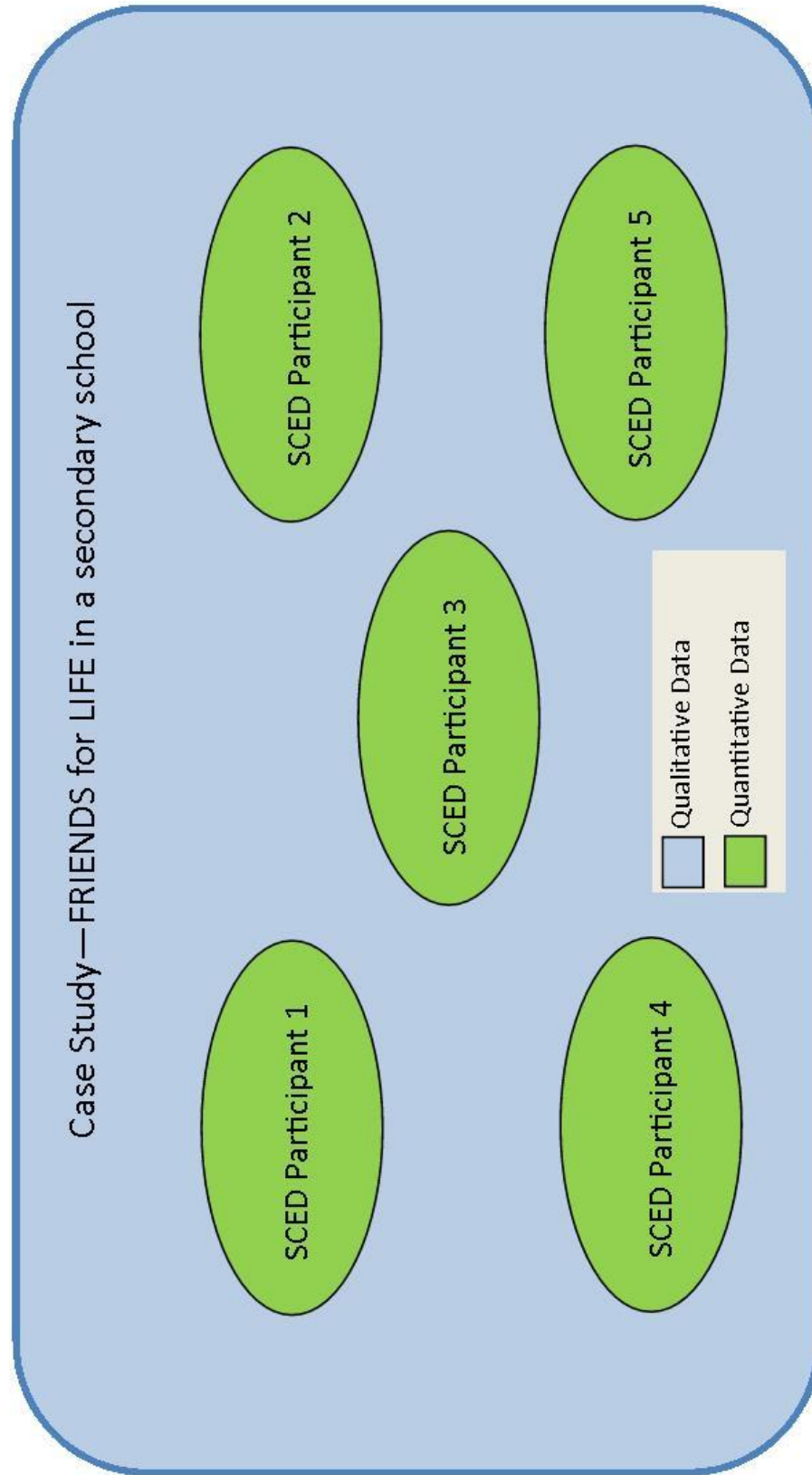


Figure 3-1 Research Design employed in this study

3.2.4 Limitations of Mixed Methods Designs

The limitations of mixed methods designs include the issues of validity and reliability pertinent for both qualitative and quantitative methodologies which will be discussed later in the chapter. Additional issues identified for mixed methods designs include insufficient justification of the need for combining methods and poor integration of the findings of the mixed methods (Mertens, 2010; Teddlie & Tashakkori, 2003).

Particular issues arose in the study regarding the compatibility of the methods used. In this study the real world / naturalistic inquiry approach adopted meant that the researcher wished to understand how FRIENDS was implemented by schools trained through TAMHS. Naturalistic approaches acknowledge the influence and impact of the presence of the researcher in constructing an understanding of the situation. A SCED study, however, relies upon carefully controlled implementation for achievement of validity. In order to achieve this, the author aimed to minimise her impact upon the delivery of the intervention, with the aim of allowing implementation to occur as it would have done without any outside evaluation, and maintain neutrality throughout the study. Although it must be acknowledged that the presence of the researcher would have impacted upon implementation, the approach taken reduced the level of involvement of the researcher in the research context. This may have increased the validity of the SCED but it also impacted on the qualitative aspect of the study and the data collected. This will be described in section 3.2.8.1. Ethical issues also arose (see section 3.55).

The next section will consider the methodologies used within the qualitative and quantitative aspects of the research design.

3.2.5 The qualitative aspect of the research

In this research qualitative methods are used to address the first research question namely;

How was FRIENDS implemented in a mainstream secondary school participating in a local authority TAMHS project?

Two further questions were asked in order to address this research question and to reflect the aims of implementation research to both understand what happened in the intervention trial, in order to explain any variations in outcomes, and to understand the dynamics and operations of the programme. These questions were;

- How well had the programme been implemented?
- How had the features of the context impacted upon the delivery of the programme?

Mertens (2010) identified seven types of qualitative research technique; ethnographic research, case study, phenomenological research, grounded theory, participatory research, clinical research and focus groups. These techniques have varied goals and researcher involvement in the research situation, many of which are incompatible with the aim of this study. The technique which appeared most usefully employed to answer the research questions within the specific context of interest was the case study.

3.2.5.1 Case Studies

Case studies are “analyses of persons, events, decisions, periods, projects, policies, institutions or other systems which are studied holistically by one or more methods... the case illuminates and explicates” (Thomas, 2011, p. 23).

Yin (2009) describes four applications of case study research which all appear pertinent to this study. These are; to explain causal links which are too complex for survey or experimental strategies to reveal; to describe an intervention and the real life context within which it occurred; to illustrate how an intervention works; and to enlighten in situations where the intervention outcome is unclear. Robson (2002) suggests that case studies are appropriate for many evaluations, particularly where the focus of concern is “the effectiveness and appropriateness of an innovation or programme in a specific setting” (p205).

3.2.5.2 Limitations of case study design

The quality of case study research is dependent, to some extent, on the features and implementation of the data collection methods employed. This will be examined later in the chapter.

In addition it is important to recognise that a limitation of case study designs is that they are not generalisable to other situations as they are a case NOT a sample which is “a portion that show the quality of the whole” (Thomas, 2011, p. 62).

3.2.5.3 The Development of the case study in the current research

Of key importance in the use of case studies is the definition of the ‘case’. One alternative would have been to consider the TAMHS project as the case and to conduct research in a number of schools, although this may have been challenging for a single researcher with a limited time frame. Instead it was decided to focus on a case study of one school participating in the local TAMHS project. The selection of the school will be described later in the chapter.

3.2.6 The quantitative aspect of the research

Within the research, quantitative data was collected in order to address two of the research questions.

- Does FRIENDS, as implemented in a mainstream secondary school participating in a local authority TAMHS project, reduce emotional distress and anxiety in secondary aged children identified by school staff as being anxious?
- Does FRIENDS, as implemented in a mainstream secondary school participating in a local authority TAMHS project, change the coping skills of secondary aged children identified by school staff as being anxious?

Alternative research designs are described below.

3.2.6.1 Group experimental design

Experimental and quasi-experimental group designs are frequently used to answer questions about the efficacy of interventions, with randomised controlled trials considered the gold standard in establishing efficacy of interventions (Mertens, 2010). Pre-test post-test single group designs have also been used in evaluations but these are vulnerable to many validity threats (Robson, 2002).

The research questions could have been approached using these designs. However the limitations of these designs have been discussed in section 2.7.2. In addition the large sample size necessary to secure statistical confidence in the result was not achievable within one school.

3.2.6.2 Single case experimental design

An alternative to an experimental or quasi experimental design is a single case experimental design (SCED). Cohen and Manion (1994) describe the characteristics of SCEDs as involving;

..the continuous assessment of some aspect of human behaviour over a period of time, requiring on the part of the researcher the administration of measures on multiple occasions within separate phases of a study. They involve 'intervention effects' which are replicated in the same subjects over time.

(p179)

In order to establish causal effect, SCEDs employ an A-B design which consists of a base-line (A) which is a sequence of measures taken before the intervention, followed by a subsequent sequence of measures taken after the intervention is introduced (B). A distinct change in the results between phases may indicate a casual effect. However, this design is weak in terms of inference of causality as it is subject to validity threats. It is difficult to establish that any difference between the conditions is not due to another change which has occurred within the setting or to maturation of the individual.

A more robust design includes a reversal phase, when the intervention is withdrawn, to create an A-B-A design. If the intervention is the cause of behaviour change it would be expected that the measures show a return toward baseline levels during the reversal phase. The ethical implications of removing an effective intervention from someone who is benefiting from it can be addressed by then reinstating the intervention in an A-B-A-B design. A reversal phase would not be appropriate in the current study, however, as the intervention involves skill development which would not be 'unlearned' during the reversal phase (Shaughnessy, Zechmeister, & Zechmeister, 2006)

An alternative way of strengthening conclusions is to use a multiple-baselines design. These designs involve repetition of the intervention either across behaviours, settings or people (Barlow & Hersen, 1984; Kratochwill & Levin, 2010). The interventions are introduced at different times, reducing the possibility of contextual changes

influencing the measures. Randomisation across behaviours, people and settings further strengthens the design (Kratochwill & Levin, 2010).

3.2.6.3 Advantages of SCED designs

SCED designs are influenced by both experimental research and case study research (Barlow & Hersen, 1984). As this method incorporates repeated measures on the same individual it allows the participants to act as their own control. This has additional benefits of avoiding the ethical issue of withholding treatment from the control group in experimental research and of enabling cause and effect conclusions to be made when there only a small number of participants (Shaughnessy et al., 2006). Other aspects of the research may be carefully controlled as in experimental research. There is also focus upon the individual. Horner, Carr, Halle, McGee, Odom, and Wolery (2005) state that SCEDs are “particularly appropriate when one wishes to understand the performance of a specific individual under a given set of conditions” (P.172).

Other advantages of SCED design include;

- It can include analysis of non-responders as well as responders,
- It provides a practical methodology for implementing and evaluating interventions in standard settings with populations in need of effective interventions,
- It can test the validity of theories predicting the conditions in which interventions are expected to be effective. (Horner et al., 2005)

3.2.6.4 The Use of SCED in the current research

The choice of a SCED design enabled a gap in the current literature evaluating FRIENDS to be addressed by evaluating programme efficacy using a scientifically based design which can focus on a small number of individuals within individual contexts described by the case study.

3.2.6.5 SCED design variables

In this SCED section of the research the independent variable was participation in FRIENDS, as delivered through the TAMHS programme over a ten week period of time. The dependent variables were the level of emotional distress and the selection of coping strategies identified as appropriate in a hypothetical scenarios by the

participant. In addition, measures of anxiety, completed by both child and parent, were undertaken pre-and post-intervention. These will be reviewed in section 3.4.4 below. As a SCED employs 'rigorous, scientific methodology' (Horner et al., 2005, p. 165) hypotheses were devised in relation to this question.

3.2.6.6 SCED Hypotheses

The hypotheses for the SCED aspect of the research were:

- The participants will experience lower levels of anxiety, as measured by the Spence Children's Anxiety Scale (SCAS) (Spence, 1999), post intervention compared to pre intervention;
- The weekly reported level of emotional distress, as measured by the Paediatric Index of Emotional Distress (PI ED),(O'Connor et al., 2010b) see section 3.4.4.3, will decrease between the baseline and the intervention phase;
- The selection of active coping strategies, as measured by a modified version of Kidcope, see section 3.4.4.4, (Spirito, Stark, & Williams, 1998) will increase, between the baseline and the intervention phases;
- The selection of negative and avoidant coping strategies, as measured by a modified version of Kidcope, see section 3.4.4.4, (Spirito et al., 1998) will decrease between the baseline and the intervention phases.

3.2.7 Summary of research design

The research design decisions were based upon the nature of the research questions. This resulted in the development of a pragmatic parallel mixed methods design, the features of which are "that both qualitative and quantitative data are collected to answer the research questions and that the two types of data are collected simultaneously or with a small time lag" (Mertens, 2010, p. 299). The first question was addressed using a case study approach, embedded within which is a SCED addressing the second and third questions. The findings of SCED and case study research designs are not easily generalisable into other contexts. This limitation has been accepted as previous research fulfils this role and the unique contribution of the current design is that it considers the implementation effectiveness of the programme

within a particular context. Detailed description of the context can support readers in evaluating the applicability of the research for their own particular context.

3.2.8 Methods of data collection employed in this research

Mertens (2010) identified the main qualitative methods of data collection as observation, interviews and document analysis whilst questionnaires and tests are more commonly used to produce quantitative data. The main advantages and disadvantages of these are summarised in table 3:5.

Method	Advantage	Disadvantage
Observation	<p>Allows direct observation without reliance on participant reports</p> <p>Can be used for participants with weak verbal skills</p> <p>Good for description</p> <p>Can adapt to unpredictable situations</p> <p>Can give a good insight into the context of behaviour</p>	<p>May be reactive effects influencing the behaviour of programme participants</p> <p>Can be difficult to determine reasons for behaviour</p> <p>Can be complicated to categorize and record behaviours – it is easy to be selective</p> <p>It is time consuming</p> <p>Cannot observe large numbers of people</p> <p>It can be challenging for observer to remain objective</p>
Interviews	<p>Good for measuring attitudes and eliciting other content from research participants</p> <p>Allows probing and clarification by interviewer</p> <p>Can provide in depth information</p> <p>Can be flexible and adapt to unpredictable situations</p> <p>High response rates</p>	<p>Interviews are time consuming</p> <p>Reactive and investigator effects may occur</p> <p>Can be difficult to analyse and compare</p> <p>Perceived anonymity by participants is low</p>
Document analysis	<p>Get comprehensive and historical information</p> <p>Doesn't interrupt programme or client's routine in programme</p> <p>Information already exists</p>	<p>Information may be incomplete</p> <p>No flexibility – it is only possible to analyse what exists</p> <p>Can be time consuming and difficult to analyse</p>
Questionnaires	<p>Good for measuring attitudes and eliciting other content from research participants</p> <p>Inexpensive</p> <p>Can be administered to many people</p> <p>A lot of data can be obtained quickly</p> <p>Can be completed anonymously</p> <p>Easy data analysis for closed questions</p>	<p>May not get careful feedback – data may be missing</p> <p>Response rates can be low and produce a biased sample</p> <p>No flexibility to explore given answers</p> <p>Unlikely to gain whole story</p> <p>Needs careful design to avoid biased response</p> <p>Requires validation</p> <p>Open ended questions may lead to vague answers and difficult to categorise answers</p>
Tests	<p>Many instruments already developed</p> <p>Can provide good measures of many characteristic properties of people</p> <p>Many are norm referenced.</p> <p>Many have reported psychometric qualities</p> <p>Data analysis is easy</p> <p>Can be administered to groups</p>	<p>They can be expensive.</p> <p>They can be biased against certain groups of people</p> <p>The psychometric data may not be applicable to the sample population</p> <p>There may be reactive effects</p>

Table 3:5 Advantages and Disadvantages of common data collection methods (based on (Johnson & Turner, 2003); Mertens (2010, p. 352); Teddlie and Tashakkori (2009, p. 239); Yin (2009, p. 102))

3.2.8.1 Case Study Data Collection Methods

The aim of the case study was to describe how FRIENDS was implemented through the TAMHS project. A case study is not a method. Instead it may be seen as a focus which will entail the use of other methods to study the case (Thomas, 2011). Case studies can include both qualitative and quantitative data but within mixed method designs case studies often provide the qualitative component (Teddlie & Tashakkori, 2009).

In deciding which data collection methods to use it was useful to refer to research into the implementation of interventions. Dane and Schneider (1998) identified five aspects of programme integrity and Durlak and DuPre (2008) identified an additional two (see table 3:6). These aspects of programme integrity were considered when decisions about data collection for the case study were made.

Three methods of qualitative data collection were identified:

- A structured diary completed by the learning mentors,
- Records of the programme delivery and pupil attendance,
- An interview of the learning mentors post programme delivery.

In addition observation was considered. It was felt that this would be useful for assessing adherence, quality of delivery and participant responsiveness. However, the possibility of reactive effects, which may alter the programme implementation and increase fidelity beyond what would be achieved in a naturalistic setting, was acknowledged. In addition, the researcher was concerned that her attendance at FRIENDS sessions would impact upon naturalistic programme fidelity and increase social desirability bias in her weekly data collection. It was therefore decided not to observe any FRIENDS sessions.

In addition, information related to the school context and the participant characteristics was collected.

Aspects of Programme Integrity	Definition	Data Collected in this study
Adherence	The extent to which specified programme components were delivered as prescribed in the programme manual	Diaries completed by learning mentors Records of session delivery Interviews with Learning Mentors
Exposure	An index which may include any of the following: a) the number of sessions implemented; b) the length of each session or c) the frequency with which programme techniques were implemented	Diaries completed by learning mentors Records of session delivery Interviews with Learning Mentors Attendance records of participants
Quality of delivery	A measure of the qualitative aspects of programme delivery that are not directly related to the implementation of prescribed content, such as implementer enthusiasm, leader preparedness, global estimates of session effectiveness and leader attitudes toward programme	Diaries completed by learning mentors Interviews with Learning Mentors
Participant responsiveness	A measure of participant response to programme sessions, which may include indicators such as level of participation and enthusiasm	Interviews with learning mentors
Programme differentiation	A manipulation check that is performed to safeguard against the diffusion of treatments, that is, to ensure that the subjects in each experimental condition received only planned interventions	Not measured
Programme reach	The rate of involvement and representativeness of programme participants	Not measured
Programme adaptation	The changes made to the original programme during implementation	Diaries completed by learning mentors Records of session delivery Interviews with Learning Mentors

Table 3:6 Aspects of Programme Integrity (Dane & Schneider, 1998, p. 45; Durlak & DuPre, 2008)

3.2.8.2 SCED data collection methods

The aim of the SCED section of the research was to evaluate the impact of FRIENDS on the coping skills and emotional distress of the participants. In addition to the SCED, levels of anxiety pre and post intervention were assessed in line with other TAMHS schools using a pre-existing anxiety questionnaire.

Within the SCED design quantitative data needs to be collected on a regular basis. This limits data collection methods to those which are brief, repeatable and quantifiable. Tests, questionnaires and observations were selected based upon these requirements.

When behaviour is observable it can be useful to count instances of the target behaviour to monitor change. In this research, however, it was considered that neither the experience of emotional distress nor the selection of coping strategies is directly observable and the behaviours arising from these may alter according to context. In addition the nature of anxious responses means that they were unlikely to be observed as individual instances during brief observation sessions. For this reason self-report questionnaires were considered a more reliable way of monitoring change in emotional distress, anxiety and coping strategies. There are a number of pre-existing standardised questionnaires available.

Similarly, with regard to coping strategies it would have been useful to observe how participants coped with real stressful events in their lives. However, these are unlikely to occur in similar levels of intensity on a weekly basis so the decision was made to use a pre-existing coping questionnaire to consider hypothetical situations.

The specific instruments employed, the method of data collection and issues of ethics and reliability will be discussed in section 4 of this chapter.

The data collection methods used are summarised in figure 3-2.

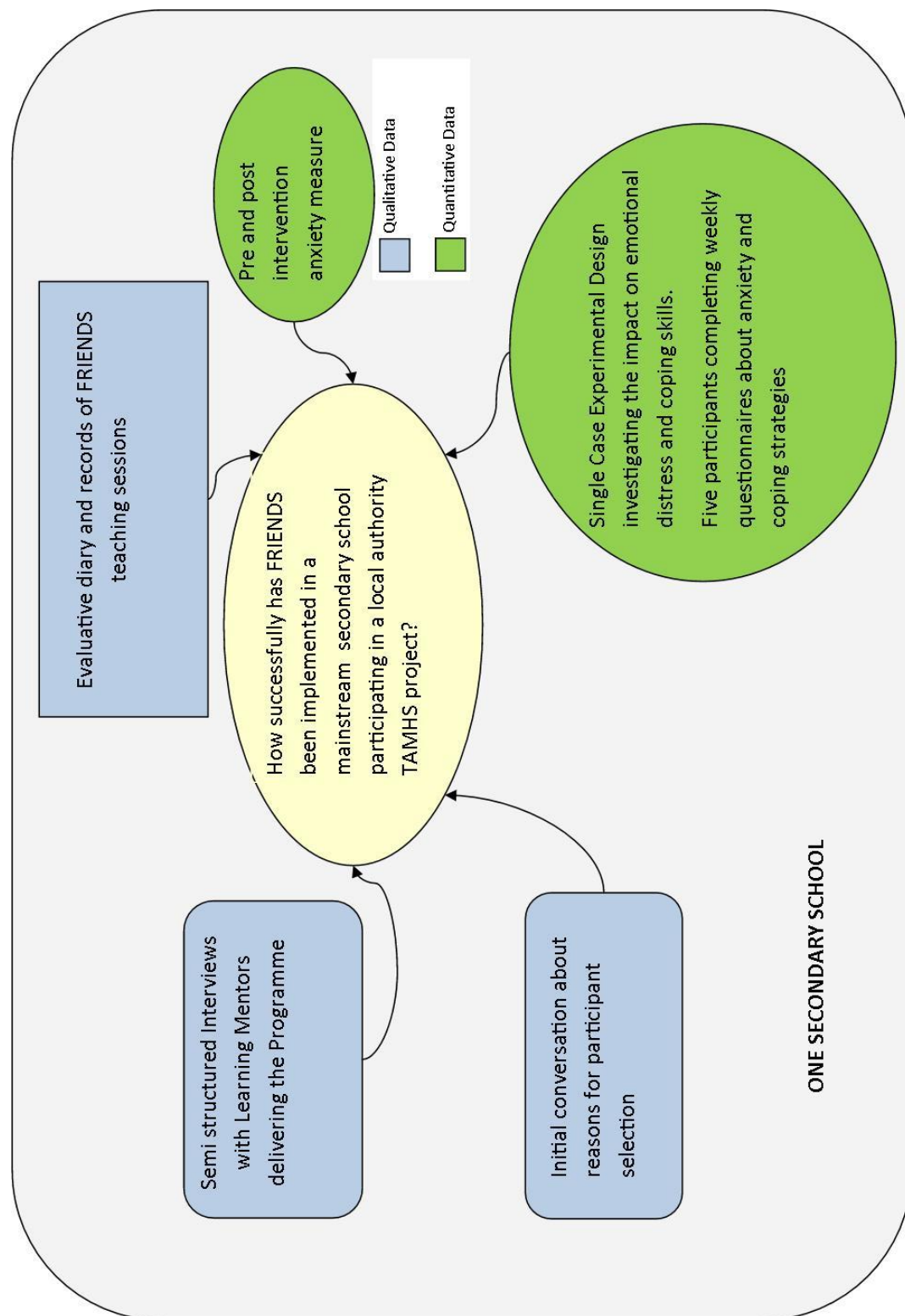


Figure 3-2 Diagram showing the data collection methods employed in the study

3.3 Sociopolitical Commitments

Greene (2008) suggests that, when researching, “the location of the inquiry in society is articulated and defended”(p.94). This section will identify the project stakeholders and the contribution of the study.

3.3.1 Stakeholders

There were a number of stakeholders involved in this project:

- The University of Nottingham
- The Local Authority
- The school, staff and young people participating in the research
- The researcher

3.3.2 The University of Nottingham

This research forms part of the training requirements for the Doctorate in Applied Educational Psychology. There are requirements regarding the size and characteristics of the research project and trainees are encouraged to undertake research which evaluates educational interventions, or innovations, which improve outcomes for children. In addition, trainees are encouraged to utilise the “distinctive perspective possessed by educational psychologists” with its “appreciation of the systemic context” into which interventions are introduced (Nottingham, 2011-12, p. 19). The author believes that this evaluation of FRIENDS meets these criteria.

3.3.3 The Local Authority

The author is currently working in the EPS of a large urban authority (LA) on a bursary placement. The senior psychologists in the service agreed the area of research. Within the LA this research contributes to the evaluation of the TAMHS project and as such the researcher was expected to present her findings and conclusions to this group.

3.3.4 The School, Staff and Young People

The school had previously volunteered to be involved in the TAMHS project. In addition the school and pupils consented to participate in this research and allow data

collection on a weekly basis. The school received feedback on the findings and conclusions of the research.

3.3.5 The Researcher

It is important in mixed method and qualitative studies to include an element of reflexivity (Teddlie & Tashakkori, 2009). Robson (2002) defines this as “an awareness of the ways in which the researcher, as an individual with a particular social identity and background, has an impact on the research process” (p172).

It is important to note the following researcher characteristics. I would describe myself as a white, British, middle aged, middle class, female trainee EP. I have a background of teaching in secondary education within the LA where this research is based. This may have resulted in the development of beliefs and expectations about the systems which occur within the LA and secondary schools in general which I need to be aware of in my analysis of data.

I have a particular interest in methods of boosting mental wellbeing in this age group which may bias me toward positive evaluations of the programme.

3.3.6 Contributions of the research

There have been many previous evaluations of FRIENDS. The unique contribution of this current study is in the research methods used and the context studied. This research focused on a case study of the implementation of FRIENDS, and considered its impact on coping, anxiety and emotional distress within a specific, real world context. This provided greater detail, about how the programme was delivered, the mediating aspects of the context and the efficacy of programme delivery for participants with particular needs and difficulties, than has been achieved in previous research. Although not generalisable the features identified are relevant for EPs aiming to understand and increase programme efficacy within other schools.

This research forms part of the LA evaluation of FRIENDS. The findings of this research are useful in evaluating the efficacy of the project and directing future developments. The issues identified during the research process require further investigation, to

determine any additional support which the EPS may be able to offer schools to implement the FRIENDS programme.

The SCED aspect of the study provides information on the response of individual pupils in terms of both emotional distress and coping strategies. It is hoped that other schools will find the information about how children with particular needs respond to the programme useful and enlightening in relation to their own experiences of delivering the programme. Consideration of changes in anxiety and coping strategies during the participation may also indicate the mechanisms of change underpinning FRIENDS.

This study also exemplifies ways in which EPs (and teachers) can evaluate programme implementation in schools.

3.4 Specific Methods Used

The next section will outline the specific methods and measures used in this study together with consideration of the validity and reliability of the research and the ethical issues involved. The timeline for the project is shown in Appendix 9.

3.4.1 Selection of School and Participants

3.4.1.1 School

Schools were selected and approached following consultation with the EP employed as the TAMHS co-ordinator. Secondary schools were approached as there is gap in the literature regarding evaluation of the FRIENDS programme in this age group and the researcher has a particular interest in this age group. Six secondary schools, which had applied to be part of the TAMHS project, were approached by letter (see Appendix 4) and a follow up phone call. Two schools agreed to take part in the research project. However, only one school succeeded in delivering FRIENDS.

3.4.1.2 Pupils

The participants were identified by the learning mentors who had been trained to deliver FRIENDS in consultation with the schools special educational needs co-ordinator (SENCO) who had also attended the TAMHS training. The TAMHS training guidelines suggested that school staff identified children for participation in the programme who they felt were at risk of anxiety. The training sessions identified the following factors as indicators that pupils are at risk for anxiety or depression (see table 3:7).

Anxiety	Depression
Excessive: <ul style="list-style-type: none">• Worry (anticipatory)• Avoidance• Attention to threat• Fast and sustained physiological arousal• Psychosomatic complaints• Difficulty in resting and going to sleep• Shyness• Social withdrawal• Perfectionism	Excessive: <ul style="list-style-type: none">• Sadness• Loss of pleasure• Social withdrawal• Early morning insomnia• Hopelessness and helplessness• Irritability• Negative memory biases• Poor concentration• Flat affect• Appetite changes

Table 3:7 Warning Signs for Anxiety and Depression (from the facilitator resources at www.pathwayshrc.com.au)

In addition the training indicated that selection may include children who were withdrawn and quiet and those in contexts which may be stressful such as 'looked after children'. It should be noted that many of these signs are not directly observable and knowledge of them, and subsequent participant selection, may reflect the relationship and communication between the learning mentors, the pupils and the adults who know the pupils well.

A total of 10 children in the school were initially identified, 5 in Key Stage 3 and 5 in Key Stage 4. Data collection began for all of the participants but the Key Stage 4 pupils left school for their GCSE exam leave before the programme was completed, hence they have not been included in this study.

3.4.1.3 Description of school and participants

The school where the research was conducted is a large secondary school of 1050 pupils aged 11-18 (OFSTED, 2010). It is located in an inner city area of a large conurbation. This area experiences significantly high levels of socio-economic disadvantage. Four times the National average number of pupils are eligible for free school meals. A majority of pupils are from minority ethnic groups, three quarters of whom speak English as an additional language with more than 40 home languages spoken (OFSTED, 2010). In 2011, 50% of year 11 pupils attained 5 or more A*-C grade GCSEs including Maths and English (Unpublished School data). In 2010 the local authority began to trade its educational psychology services. The school has continued to subscribe to the service and therefore has a long relationship with the EPS.

3.4.1.4 Description of Participants

The participants were 5 pupils in years 7 and 8. There were 3 boys and 2 girls, 2 pupils of British / Afro-Caribbean origin and 3 of British / Asian origin. All spoke English as their first language although 3 spoke additional languages at home. All participants had been selected by the learning mentors, using the guidance above to support them in identifying pupils as being at risk of anxiety and as being likely to benefit from participating in FRIENDS. More details of the participants are included in their individual case studies in the results section 4.4.

3.4.2 Intervention

The FRIENDS intervention is a CBT based programme which aims to be an early intervention suitable as ‘both a treatment and a school-based prevention course promoting self-development’ (Barrett, 2007).

The FRIENDS intervention consists of ten weekly sessions of one to two hours in length, plus two booster sessions occurring one and three months after the end of the intervention. There are also two parent sessions (Barrett, 2004). The two booster sessions and parent sessions were not delivered. The session topics are shown in table 3:8.

Session	Topic
1	Feelings – understanding Feelings in Ourselves and others
2	Introduction to Feelings
3	Introduction to Body Clues and Relaxation
4	Helpful and Unhelpful Self Talk
5	Changing Unhelpful Thoughts into helpful Thoughts
6	Introduction to Coping Step Plans
7	Learning from our Role Models and Building Support Teams
8	Using a Problem Solving Plan
9	Using the FRIENDS skills to help ourselves and others
10	Review and Party

Table 3:8 Description of the Topics Included in Intervention Sessions of the FRIENDS Programme (Barrett, 2010a)

The programme was facilitated by two school based learning mentors. A learning mentor’s role is to “support, motivate and challenge pupils who are underachieving. They help pupils overcome barriers to learning caused by social, emotional and behavioural problems.” (DES, 2012). They need to “be empathetic and a good listener, to be encouraging and motivating, and to enjoy mentoring young people” (DES, 2012). The learning mentors were two women aged between 40 and 50 who each had their own children and in one case grandchildren. The learning mentors each had around 3 years’ experience in that role, having had teaching assistant roles before. The author felt that the relationship between the learning mentors and the participants appeared to be a maternal and caring one.

The learning mentors were trained in the delivery of the FRIENDS on a two day course. The course was delivered by an EP and a Clinical Psychologist who had received training from the Pathways Health and Research Centre (HRC) to become Licensed Trainers, able to train FRIENDS programme facilitators using training materials provided by the Pathways HRC online. The training included the following elements;

- A brief introduction to CBT.
- Guidance about how to identify anxious children (see table 3.7)
- Examples of ice breakers and relaxation activities
- An overview of the FRIENDS for life programme
- An overview of FRIENDS youth
- An introduction to resources that may be useful
- Time to plan the delivery of FRIENDS.

The author also attended the course. The delivery of the FRIENDS was also supported by having a manual (referred to as the Manual). The learning mentors used the 'FRIENDS for Life' manual rather than 'My FRIENDS youth'. This was due to less dense text in FRIENDS for life, a layout which the learning mentors felt would be more appealing and accessible to the selected participants. Each child had their own workbook.

The FRIENDS sessions were weekly sessions of one hour. They occurred on the same days each week. The sessions were run in different rooms according to the space available.

3.4.3 Procedure

3.4.3.1 Consent

Ethical consent for the study was gained from the University of Nottingham. Consent for participating, collecting, recording and storing information was requested from parents, from the school staff involved in delivering the project and from the children themselves (see consent letters in Appendices 6 to 8). As the intervention was to be run by the school, as part of the school curriculum, school procedures were followed regarding consent to participate in FRIENDS. It was anticipated that children who did not have consent to participate in the evaluation would still receive the intervention although this situation did not arise.

3.4.3.2 Initial data collection

Prior to the beginning of weekly monitoring, information about the participants was collected from the school including curriculum levels and the reasons for including them in the intervention. It was realised that the parental and child consent forms did not refer to accessing school records which is a routine part of the TEP role once parental permission for involvement with a child has been received. This is discussed further in section 3.5.5. Any previous EP involvement, and the nature of this, was also identified. The participants then met individually with the researcher, in the school, to complete the consent forms and the Spence Children's Anxiety Scale (SCAS) (Spence, 1999) (see Appendix 10). The parents of the children involved were asked to complete the adult version of the SCAS (See Appendix 11) although only two parents returned this.

3.4.3.3 Baseline phase

During the baseline phase the participants met weekly with the researcher to complete The Paediatric Index of Emotional Distress (PI-ED) (O'Connor et al., 2010b), (see Appendix 12) and a modified version of Kidcope using vignettes (Spirito et al., 1998) (see Appendix 13). These measures are reviewed below in section 3.4.4. The same procedure was used for completing the measures each week (see Appendix 14). It was envisaged that this weekly meeting would occur on the same day and time each week but timetabling constraints and the desire to alternate missed lessons meant that the meeting time varied.

Ideally the baseline phase would have run long enough to establish stability which makes it easier to draw conclusions regarding the impact of the intervention (Kratochwill, Hitchcock, Horner, Levin, Odom, Rindskopf, & Shadish, 2010). However, the length of the baseline phase was dictated by the timetabling decisions of the school regarding when to run the intervention. Four baseline measures were taken before the intervention began.

3.4.3.4 Intervention phase

During the intervention phase the participants participated in the FRIENDS intervention once a week as delivered by two learning mentors trained through the TAMHS project. Records of attendance were kept.

The participants continued to meet with the researcher on a weekly basis to complete the PI-ED and Kidcope measures. The measures were taken using the same procedure every week (see Appendix 14). If a participant was absent for this meeting no anxiety measure was taken and the participant was asked to complete that week's Kidcope scenario the following week.

The staff delivering the intervention were asked to complete a structured diary after each FRIENDS session (see Appendix 15).

During the intervention phase the researcher was approached by the learning mentors with regard to her supporting them to select the most appropriate tasks from the manual. In order to maintain neutrality and to avoid impacting upon the characteristics of the implementation which would be achieved through the TAMHS training alone, the researcher declined involvement and referred the mentors to the support as suggested on their TAMHS training i.e., to contact the school's educational psychologist. It is acknowledged that this decision may have had implications for the levels of fidelity achieved and that there may be ethical issues (See section 3.5.5)

3.4.3.5 Post Intervention

After the intervention the SCAS was completed by the participants. SCAS questionnaires were sent home to parents but there was a zero return rate, possibly due to the start of the school holidays which was unpredictably brought forward by a few days.

A semi-structured interview was used to explore how school staff felt the implementation of FRIENDS had gone (see Appendix 16). This was conducted after the summer holidays towards the start of the autumn term due to the unpredicted early term finish.

An analysis of the lesson plans for the sessions was undertaken to compare the implemented programme compared to the published programme.

The school staff were debriefed face to face whilst the participants and their parents were provided with a written debrief of the study findings and an opportunity to contact the researcher for further discussion was given.

3.4.4 Measures

The dependent variables in the SCAS have been identified as anxiety, emotional distress and coping skills.

3.4.4.1 *Self-Report Scales*

A number of pre-existing self-report measures were used in the SCED section of the research to measure these dependent variables. These were the Spence Children's Anxiety Scale (SCAS)(Spence, 1999a), the Spence Child Anxiety Scale for Parents (SCAS-P) (Spence, 1999a) and the Paediatric Index of Emotional Distress (PI-ED) (O'Connor, Carney, House, Ferguson, & O'Connor, 2010b). The Kidcope (Spirito, Stark, & Williams, 1998) required modification (see appendix 12). The use of self-report measures has been a common feature of previous evaluations of FRIENDS (see section 2.7.3).

Using existing tests and scales can be advantageous as details of reliability and validity are often available and there is also the opportunity to compare results with previous research (Robson, 2002). They are, however, not always compatible with the aims of the research and may require modification.

The self-report measures used in this study are presented below together with the reasons for the selection. Limitations of self-report measures will be considered later in this chapter when considering issues of validity and reliability.

3.4.4.2 The Spence Children's Anxiety Scale (SCAS)(Spence, 1999)

The SCAS was selected to measure the dependent variable of anxiety pre and post intervention.

This scale is a questionnaire, completed by the child, used to assess children's levels of anxiety. It is suitable for ages 8-15.

The scale comprises 44 items and assesses 6 domains of anxiety (generalized anxiety, panic/agoraphobia, social phobia, separation anxiety, obsessive compulsive disorder and physical injury fears)(Spence, 1999) . The items consist of a statement then the child circles the word that shows how often that item happens to them e.g.

I worry about thingsNever Sometimes Often Always

(Spence, 1999)

The internal consistency of the scale is reported to be high (coefficient alpha of 0.92) and the 12 week test-retest reliability satisfactory (coefficient alpha of 0.63)(Spence, Barrett, & Turner, 2003). Spence, Barrett, and Turner (2003) report that the test also showed validity through strong correlation with scores on the Revised Children's Manifest Anxiety Scale (RCMAS)(Reynolds & Richmond, 1978).

There is a parent version of the scale which has good convergent validity with the child version of the SCAS (Nauta, Scholing, Rapee, Abbott, Spence, & Waters, 2004) and another parent measure the Child Behavior Check List (Achenbach, 1991).

It was chosen for this study as it is brief to administer, widely used, freely available and has featured strongly in other evaluations of FRIENDS. In addition all schools trained by the TAMHS project are asked to administer the SCAS pre and post participation in FRIENDS for the LA evaluation.

3.4.4.3 The Paediatric Index of Emotional Distress (PI-ED) (O'Connor et al., 2010b)

The PI-ED was selected to measure the dependent variable of emotional distress on a weekly basis.

The PI-ED is a recently developed measure of emotional distress, a single construct consisting of anxiety and depression (O'Connor, Carney, House, Ferguson, Caldwell, & O'Connor, 2010a). It is based upon the Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983) which is a similar scale used with adults (O'Connor et al., 2010a). Unlike the HADS, in which the levels of anxiety and depressions are separately evaluated, the scores on the PI-ED reveal only a level of emotional distress reflecting the argument that anxiety and depression are subordinate constructs of a higher order construct (O'Connor et al., 2010b; Tyrer, 2001). It is therefore acknowledged that a weakness in the use of the PI-ED in the current study is the inability to differentiate between the level of anxiety or depression experienced by the participants. However, as outlined in the literature review, anxiety and depression are closely linked and the aims of the FRIENDS programme include reduction in depression and emotional distress (Barrett, 2007). It was decided that the score on the PI-ED would therefore be useful in measuring the impact of FRIENDS. In addition the PI-ED has previously been used to evaluate the impact of FRIENDS (Paul, 2011).

The PI-ED has been standardised for use with 8-16 year olds and has a reading age of 7 years (O'Connor et al., 2010b).

The measure has been standardised using a sample of 1108 . The validity of the measure was assessed in comparison with the Beck Youth Inventories Second Edition (Beck, Beck, Jolly, & Steer, 2005) anxiety and depression scales. The correlations produced indicate discriminant validity for the PI-ED (O'Connor et al., 2010b). It should be noted that the standardisation population (89% of who reported their ethnicity as white British (Paul, 2011)) differed significantly from the participants in the current study.

Internal reliability was assessed using Cronbach's coefficient alpha and was found to be above 0.70 which is the level at which a scale is judged to be reliable (O'Connor et

al., 2010b) . The test/ retest correlation of 0.81 indicates that the measure is internally consistent and stable over time (O'Connor et al., 2010b).

Concerns have been raised by the authors of the scale regarding the clinical cut off value of the scale which they believe is currently too low (Paul, 2011). As the purpose of using the scale was to monitor change rather than screen for emotional distress this was not considered to be a difficulty for the current study.

The measure consists of 14 items such as

I feel 'shaky' or 'wound up'

☐ Always

☐ A lot of the time

☐ Sometimes

☐ Not at all

The measure was selected due to its brevity, taking only 5-10 minutes to complete. O'Connor et al. (2010b) state that it is suitable to be "re-administered as and when required" (P.8) and the rubric asks participants to "tick the box that describes you best over the last week including today"(PI-ED record form (O'Connor et al., 2010b, p. 8). This suggests that the measure is suitable for repeating on a weekly basis as was required by the research design.

3.4.4.4 Kidcope (Spirito et al., 1998)

The Kidcope was selected to measure the dependent variable of coping skills on a weekly basis.

The Kidcope is a brief measure of a child's coping strategies. It contains 10 common coping strategies which are applicable across many, but not all, situations (Spirito, 1996.). These strategies are categorised into types of coping (see table 3:9).

Type of coping	Coping Strategy
Active	cognitive restructuring, problem solving, social support and emotional regulation
Avoidant	distraction, social withdrawal, wishful thinking and resignation
Negative	self-criticism and blaming others

Table 3:9 Types of Coping Strategy (Spirito, 1996.)

The measure consists of a series of questions based on a problem or a stressful experience which the child identifies. The participant is asked to indicate their distress response to the situation using a series of closed questions. He/she is then given a number of possible things they might do in response to the situation and asked to indicate how often they might do this and how much it helped. An example is shown in table 3:10.

		How often did you do this?				How much did it help?				
		Not at all	Sometimes	A lot of the time	Almost all the time	Not at all	A little	Some - what	Pretty much	Very much
1	I would think about something else; try to forget it and/or go and do something like watch the telly, read or play games to get it out of my mind.	0	1	2	3	0	1	2	3	4

Table 3:10 Example item from Kidcope(Spirito et al., 1998)

Reliability has been measured for short periods ($r=.41-.83$) of 3-7 days and longer periods of 10 weeks (.15-.43) (Spirito et al., 1988). Spirito et al. (1988) suggest that a low test – retest correlation reflects the participant's changing view of the stressful situation they have presented over time. This is compatible with the view of coping as a process which is constantly changing (Lazarus & Folkman, 1984). Validity has been

assessed by comparing Kidcope to other measures such as the Coping Strategies Inventory (CSI) and Adolescent –Coping Orientation for Problem experiences Inventory (ACOPE) (Spirito et al., 1998). Correlations with the CSI ranged from .33 to .77 and with the ACOPE from .08-.62. These modest correlations suggest some concurrent validity (Spirito et al., 1988). The measure is not standardised.

The measure was selected as it was available within the EPS and is brief to administer. In addition it has been used as part of the TAMHS project to evaluate the impact of FRIENDS previously. The measure did, however, require adaptation in order to use it weekly. This means that the standardisation information provided above cannot be depended upon within this research.

It would be difficult to track any change in coping strategies over the course of the baseline and intervention if the participants provide their own problems or stressful situations as the changing nature of these would result in changing strategies, masking any impact of FRIENDS. Additionally it was felt that there were ethical issues regarding the anxiety which may be caused by recalling stressful situations on a weekly basis. To address these issues four vignettes of stressful situations were devised for the participants to respond to (see Appendices 12&13 for scale adaptation).

It is noted that the approach taken fails to measure how the participants *would* behave in a stressful situation. Instead it measures what they *say* they would do in a hypothetical situation; this does not mean that they would behave in the way that they say. FRIENDS aims to teach students how to cope with challenging situations. It is hoped that the measure reflects the changing knowledge of participants regarding the best way to respond to a particular stressful situation even if it does not establish how the participant would behave.

3.4.4.5 Development of the KIDCOPE to include vignettes

It was decided to modify the Kidcope in order to ask participants about the coping strategies they would use in a hypothetical situation, presented as vignettes, rather than asking them to report on the coping strategies they have used in a situation they have been in. This approach has been used in previous research (Brown, O'Keeffe,

Sanders, & Baker, 1986; Jenkins, Smith, & Graham, 1989; Spirito, Stark, Grace, & Stamoulis, 1991).

Vignettes are “text, images or other forms of stimuli to which research participants are asked to respond” (Hughes & Huby, 2002, p. 382). Participants perceptions, beliefs and attitudes may be studied or they may be asked about how they would act in a situation (Hughes, 2001). They are useful in providing “a less personal and therefore less threatening way of exploring sensitive topics” (Barter & Renold, 1999, p. 1).

Jenkins, Bloor, Fischer, Berney, and Neale (2010) suggests that vignettes are “effective longitudinal research instruments” (p176) useful for tracking changes in attitude and interpretation. There are some limitations in the use of vignettes such as a tendency to give socially desirable answers and a possible discrepancy between what participants believe they would do and what they would do (Barter & Renold, 2000).

The vignettes were developed with reference to previous research into problems experienced by young people. Stark, Spirito, Williams, and Guevremont (1989) and Spirito et al. (1991) found that for 9-14 year olds school, siblings, parents and friends were the most commonly cited areas of difficulty with older teenagers reporting school, parents, friends and boy/ girlfriends as the source of their concerns. As this research is over two decades old, however, it is possible that the concerns and/or the age at which the concerns develop may have changed.

Weems, Silverman, and La Greca (2000) conducted research into the worries of children diagnosed with clinical levels of anxiety. The most common stressors listed were; health, school, disasters, personal harm, future events, classmates and performance. More recent research by Farrell, Sullivan, Kliwer, Allison, Erwin, Meyer, and Esposito (2006) considered problems of urban adolescents from low income families, who have more similarity to the participants in this study, and identified five domains of stressor; child, family, peer, school and neighbourhood. Two key categories of stressors were; peer provocation, including name calling, teasing and being the subject of rumours, and perceived injustice such as being picked on by teachers. Also at least one third of the problems involved friends.

Having identified key areas of concern for this age group there were further considerations in the development of the scenario vignettes. In particular, ethical considerations suggested that the problems should not be too serious, for example death or suicide, and they should not introduce worries into the participant's life that they may not have considered, such as parental divorce. It was also decided that the problems should be situations where different coping strategies could be used and the participants would have some element of control. In addition situations which may raise issues within the school, such as teachers 'picking on' pupils, and illegal situations, which may lead to disclosures, were avoided.

It is also important that the vignettes are plausible. Barter and Renold (2000) suggest using agony aunt letters in teenage magazines to make scenarios appear real and conceivable. In the current study a teen internet problem page (Fox, 2000-2012) was searched for suitable problems to form the basis of the vignettes. Four scenarios were identified and modified by changing names and genders. These were then read by 7 people of similar age to the participants to check that the scenarios were believable and understandable. Two of the scenarios were non-gender specific and two had a male and female version to help participants identify with the situation. The vignettes are included in appendix 13.

Unfortunately the time scale of intervention implementation planned by the school resulted in insufficient time to fully pilot the adapted measure. It would have been useful ask a similar sample of young people to those included in the study to complete the questionnaires on two separate occasions in order to gain their views of the experience of using the instrument, to consider the responses given in terms of gaps or unexpected answers , to check for any issues in administering and scoring and to gain some idea of how stable their responses were with no intervention (see Mertens (2010)).

The four vignettes were presented to the participants over a four week cycle so that they had each scenario once during the baseline phase and three times over the intervention phase thus allowing any changes in the response to individual situations to be recorded. The order in which each participant received the scenarios differed

between participants and was decided randomly for the first cycle and was then repeated for subsequent cycles.

3.4.4.6 Semi structured Interview

A semi structured interview schedule was designed by the researcher to guide the interviews, focusing on how the school staff had implemented FRIENDS (see Appendix 16). This was designed with reference to Robson (2002) and included a series of headings (Training, Delivery, Content, Participants and Future Use) and some key questions under each of these heading.

The interview was conducted with both of the learning mentors who had delivered the programme together. This was due to an expressed preference on their part. Robson (2002) suggests that interviews can take place in a group context as well as one to one although this should not be confused with a focus group which has specific characteristics.

The interview was recorded and later transcribed (see Appendix 18).

3.4.4.7 Structured Diary

A structured diary was devised for the school staff to complete after each session (see Appendix 15). The aim of this was to monitor implementation of the programme by checking what each session had included and allow staff to comment on the achievement of aims, areas to improve on, and the engagement of the participants.

3.5 Issues of Data Quality

The challenge for mixed methods approaches to psychology is that qualitative and quantitative research has different standards for evaluating the quality of the data (Teddle & Tashakkori, 2009). Qualitative research assesses quality in terms of credibility and dependability whilst quantitative research considers validity and reliability (Mertens, 2010). Essentially, however, the key questions are the same:

- To what extent am I measuring /recording/capturing what I intended to rather than something else?
- Assuming I am measuring / capturing what I intend to, is my measurement/ recording consistent and accurate?

(Teddle & Tashakkori, 2009, p. 209)

To consider these questions the quantitative and qualitative aspects of the study will be considered separately.

3.5.1 The quantitative section of the study

This section will consider issues of data quality pertinent to the SCED aspect of the study.

3.5.2 Validity

This is the consideration of whether the findings are really showing what they purport to (internal validity) and the extent to which they are generalisable.

Within this study a number of possible threats to the validity and quality of inference have been identified and addressed (see table 3:11).

THREAT TO VALIDITY	DESCRIPTION OF THREAT	ACTION TAKEN TO REDUCE THREAT
History	Other environmental factors may be responsible for changes in the dependent variable	More than one dependent variable used, more than one participant involved Thick description of the context included to enable other researchers to judge the impact on alternative variables
Testing	Change may occur as a result of the repeated measures used	This cannot be controlled in this design although a longer baseline may have enabled this to be monitored
Instrumentation	The administration of the measures may be inconsistent	Measures will be implemented by the researcher using a planned process (see Appendix 14)
Mortality	Participants may drop out	Attendance records will be considered in the selection of participants. More participants will be recruited than are required
Maturation	Development of the participants may contribute to any changes in the dependent variable	This cannot be controlled for in this design but the short time scale of the study reduces the impact of this
Fidelity to programme	The FRIENDS programme may not be implemented as suggested	Measures to <i>ensure</i> fidelity to the programme will NOT be used as the researcher wished to understand how the programme is implemented within this real world setting. The case study aspect of the research will focus upon <i>how</i> FRIENDS is implemented and use thick description to share this with readers of the research. This will involve the researcher aiming to maintain neutrality throughout involvement.
Sampling	The participants may not be representative	As this is a case study design, with no attempt to generalise, this limitation has been accepted
Hawthorne effect	The participants may be affected by participation rather than the intervention	The baseline measures may indicate participation effects alone, any difference between baseline and intervention will reflect the intervention

Table 3:11 Threats to validity and actions taken to reduce this (Robson, 2002)

3.5.3 Threats to Reliability

Reliability refers to whether or not the measures used are stable and consistent and measure what they purport to (see table 3:12). Reliability of the measures therefore contributes to the validity of the research.

THREAT TO RELIABILITY	DESCRIPTION	ACTION TAKEN TO REDUCE THREAT
Measures	<p>The measures used may be unreliable.</p> <p>Self-report measures may be unreliable.</p> <p>The participant may lack the motivation or cognitive ability to complete the measure.</p> <p>Modification of measures such as the Kidcope means that reliability and comparability to other measures is unknown</p>	<p>A number of pre-existing, validated methods have been chosen to increase reliability.</p> <p>Using a variety of measures and sources of information increase reliability.</p> <p>Administering self-report measures with an experimenter present to ensure the measure is understood and correctly completed.</p> <p>Social desirability bias is acknowledged.</p> <p>Measures were chosen which are suitable for children and have an appropriate reading age. The measures were brief and positive verbal feedback was given to encourage completion.</p> <p>No action taken – limitation had to be accepted</p>
Analysis	<p>The analysis of the SCED graphs and the qualitative analysis are open to experimenter bias.</p>	<p>The visual analysis undertaken employed a clearly described methodology to enable replication.</p> <p>A second researcher was asked to visually analyse the SCED graphs.</p> <p>Interrater reliability was calculated.</p>
Participant error	<p>Participant responses to the measures may reflect contextual changes.</p>	<p>The weekly measures are completed with the same researcher to minimise differences. Other aspects of the participant context could not be controlled.</p>
Construct Validity	<p>Do the measures reflect the constructions they purport to?</p>	<p>The published measures used have had their validity evaluated against similar measures.</p> <p>A variety of measures and sources have been used to triangulate information.</p> <p>The Kidcope may not measure the coping skills participants would use in a real situation, only what they say they would use. This limitation is accepted as the measure may show knowledge of more appropriate coping skills before these are generalised into real life scenarios.</p>
Practice Effects	<p>The weekly completion of the measures may influence how accurately they are completed.</p>	<p>This cannot be controlled for. It is unclear whether normalisation of the process will make the participants respond with greater or less accuracy.</p> <p>Four vignettes in the Kidcope are rotated to minimise habitual responses.</p>

Table 3:12 Threats to reliability and actions taken to reduce these (Robson, 2002)

In addition Kratochwill et al. (2010); Kratochwill, Hitchcock, Horner, Levin, Odom, Rindskopf, and Shadish (2012); Mertens (2010) outline a number of quality considerations for single case experimental design (see table 3:13) which have been considered in the design of the research.

QUALITY CONSIDERATIONS FOR SINGLE CASE EXPERIMENTAL DESIGNS	CONSIDERATION IN CURRENT DESIGN
The independent variable must be systematically manipulated at least three times to demonstrate an intervention effect.	The independent variable was participation in FRIENDS. This was introduced by the school for all participants simultaneously. As a learning programme it is not possible to withdraw the programme and therefore systematically manipulate it. This limitation means that the study does not meet design standards.
The data collected should be objective measurements measured systematically by more than one assessor.	The data involves self-reports from participants using existing tests with standard marking techniques with a set procedure. This negates the need for more than one assessor.
Repeated measurements should be taken across all phases of the study. Each phase must have a minimum of 3 data points.	4 measures were taken in the baseline and 13 in the intervention.
Direct interventions should be evaluated with concern for treatment fidelity.	Detailed information about programme implementation was collected.
Behaviours of long duration which are unlikely to change without intervention should be evaluated.	Coping skills may develop with age but are unlikely to change much over this time scale without intervention. Emotional distress may change frequently in response to circumstances and this will be considered in the conclusions drawn.
The intervention should be applied to several people with different characteristics.	There were 5 participants with similar ages and context but different reasons for inclusion in the programme. The researcher had no control over selection.
The procedures for the intervention and the measures should be standardised.	The procedure for the measures was standardised and the intervention implementation was monitored.
The use of multiple outcome measures strengthens evidence.	Coping skills and anxiety were monitored throughout. Pre and post data about anxiety was also collected and teacher and pupil views of their progress were collected.
The use of multiple baselines across behaviours, people and settings improves ability to generalise.	Multiple baselines across people were used but it was not possible to stagger these.
The social validity of the intervention should be established.	This has been established in previous research.

Table 3:13 Quality considerations for single case experimental designs (Kratochwill et al., 2010; Kratochwill et al., 2012; Mertens, 2010)

3.5.4 The qualitative section of the study

In qualitative research issues of data quality and inference quality are not generally considered separately, as a constructivist viewpoint argues that there is no such thing as pure data, it is always constructed and interpreted (Teddlie & Tashakkori, 2009). There are, however, a number of criteria for *trustworthiness* in qualitative research. These are shown in table 3:14 together with steps taken in this research to meet these criteria.

Criteria and Definition	Steps taken to meet the criteria
<p>Credibility</p> <p>Is the reconstruction of the enquirer credible to the understanding of the participants in the situation?</p>	<p>Involvement in the setting for an extended period of time (6 months).</p> <p>Collection of data from a number of sources (triangulation)</p> <p>Discussion of data with a “disinterested” peer (peer debriefing).</p> <p>Consideration of negative cases</p>
<p>Transferability – transferring of inferences from a specific sending context to a specific receiving context</p>	<p>Using thick description to communicate as many contextual factors as possible</p>
<p>Dependability – the extent to which the process of the inquiry is dependable – the ability of the human instrument to yield consistent results</p>	<p>Clear description of the processes and decision making which have been undertaken in the research process</p>
<p>Confirmability – the extent to which the product of the inquiry is confirmable, including whether results are grounded in data, whether inferences are logical, whether there is inquirer bias and so forth.</p>	<p>Careful examination of the conclusions to check that they are supported by the results and the relationship between the results and conclusions are clear. Discussion of the data and inferences drawn from them with a peer</p>

Table 3:14 Criteria for trustworthiness in Qualitative Research (based on Teddlie and Tashakkori (2009, p. 296)

3.5.5 Ethical considerations

Ethical consent was sought and received from the University of Nottingham Ethics Committee (See Appendix 3).

A number of ethical issues, as outlined by the British Psychological Society (BPS, 2006) have been considered during this research. The way they were dealt with is outlined below (Table 3:15).

In addition some ethical issues arose during the course of the research:

- It was highlighted to the author that parental consent had not been requested for access to the pupils' academic records. This was an oversight on the part of the author, possibly due to these records being available within the typical daily role of a trainee educational psychologist, once parental consent for the educational psychologist to be involved with the child has been obtained. All reference to school attainment and Individual Education Plans was anonymised to prevent identification of the individual participants but parental permission will be sought prior to the publication of any academic information about the participants.
- During the course of the intervention the researcher was approached by the learning mentors and support was requested to select the most appropriate tasks from the manual. In order to maintain neutrality and to avoid impacting upon the characteristics of the implementation which would be achieved through the TAMHS training alone, the researcher declined involvement. As an alternative route to obtain support was available, by referring the mentors to the support as suggested on their TAMHS training i.e., to contact the school's educational psychologist it was felt that this would not cause undue difficulty for the learning mentors. However the author acknowledges that her support was more accessible than that available from the school educational psychologist and her involvement in planning may have had an impact upon the adherence to the programme which may, in turn, have increased the

impact of the programme on the participants. With hindsight it would have been more ethical to provide the requested support and acknowledge the impact of her involvement on the validity of the study.

Ethical Issue	
Opportunity to participate	<p>Which children received the intervention was decided by the school using their standard procedures and therefore, although there may be ethical issues regarding who is selected, it was largely outside of the researcher's control. Careful questioning regarding selection processes reduced the possibility of any unfairness or prejudice.</p> <p>The intervention will be continued to enable other children to benefit.</p>
Informed Consent	Fully informed consent for participation in the study, recording and storage of information and publishing of anonymised data was gained from children, their parents and staff involved in the study. (see Appendices 6-8)
Withdrawal	It was explained to all involved, and made clear in the information about the study and on the consent letters, that participants can withdraw from the study at any time without penalty.(see Appendices 6-8)
Confidentiality	All data was collected anonymously and filed safely. Participants were assured of confidentiality with the exception of any disclosure which was felt to place the participant or somebody they mention in a position of danger. In this instance school and local authority safeguarding procedures will be applied.
Freedom from harm	<p>There was a possible risk to the emotional well-being of participants from the discussion of anxiety. To reduce risk during the data collection any concerns about anxiety were referred to school staff. To reduce the risk of this the Kidcope measure was adapted to focus upon hypothetical stressful situations rather than existing or recent stressful situations.</p> <p>A member of school staff was present during the data collection. Children's responses during the data collection and intervention were monitored and if there were concerns about the levels of distress a child was experiencing these were discussed with school staff and referral systems utilised. Children who had elevated levels of anxiety were discussed with school staff to ensure appropriate support was in place.</p>
Debrief	Participants in the study, their parents and school staff were given a written debrief in which findings are presented. The opportunity was given for the participants, staff and parents to discuss the study's findings further.

Table 3:15 Ethical Considerations

3.6 Summary of Method Section

This chapter has presented the rationale for the research methodology employed in this study. This study is underpinned by the pragmatic paradigm and uses mixed methods to address the research questions. The focus of the study is the implementation and impact of FRIENDS in a secondary school when the programme is delivered by learning mentors trained through the local TAMHS project. Qualitative methods were used to collect data about implementation of the FRIENDS programme whilst a SCED was used to monitor participant response to the programme in terms of anxiety and coping skills.

Additionally issues of reliability, validity, data quality in SCED designs, data trustworthiness in qualitative designs and ethics have been considered.

Analysis and Results

4 ANALYSIS AND RESULTS

This chapter will present the results of the research. The first section will explain the method of analysis used, and the rationale for its selection, to address the first research question. The results pertinent to this question will then be presented. The second section will use a similar format in relation to research questions 2 and 3.

Question 1: How has FRIENDS been implemented in a mainstream secondary school participating in a local authority TAMHS project?

4.1 Analysis relating to research question 1

The research question can be subdivided into two aspects:

- How was the programme implemented?
- How did features of the context impact upon the delivery of the programme?

4.1.1 How was the programme implemented?

The first of these sub questions was addressed by collecting information about the programme delivery. It had been anticipated that the programme facilitators would complete a structured diary following each session (see Appendix 15). Unfortunately the learning mentors did not find time to do this but did keep records of what they had delivered in each session. These records were compared with the sessions as described in the FRIENDS manual ('the Manual'). Successfully delivered aspects of the programme were identified and recorded. The proportion of tasks from the Manual delivered in school was calculated for each session but it should be noted that such quantitative analysis fails to acknowledge the relative length of the task or its potential contribution to the programme. In order to address this, the omitted activities were also identified and the implications of these omissions were considered (see Appendix 17). The impact of these omissions was discussed with a colleague within the LA, who

had previously facilitated FRIENDS in a secondary school, to check that the implications noted were logical.

In addition the interview with the learning mentors (see Appendix 18) provided information about aspects of programme integrity.

4.1.2 How did features of the context impact upon the delivery of the programme?

The second sub question was addressed by conducting an interview with the learning mentors. This was recorded and transcribed. Activity theory was used to systematically structure the data analysis.

4.1.2.1 Activity Theory

Activity theory is a tool for “investigating the processes by which social, cultural and historical factors shape human functioning” (Daniels, 2004). It is derived from classical German philosophy, the writings of Marx and Engels and the Soviet Russian cultural-historical psychology of Vygotsky, Leont’ev and Luria (Engestrom, 1999). Activity theory is underpinned by the belief that human activity only exists, and can be understood, through interaction with the social and cultural world. This ontology places the approach within a constructivist epistemology. Activity theory has been developed, by Engestrom, through three ‘generations’ of complexity (see Daniels (2001)).

First Generation activity theory has a basis in Vygotsky’s concept of mediation. This concept developed the behaviourist view, of human activity as ‘stimulus-response’, by acknowledging that activity is motivated (has an object) and is mediated by the social and cultural tools available. Engestrom depicted this in the following model (Figure 4-1).

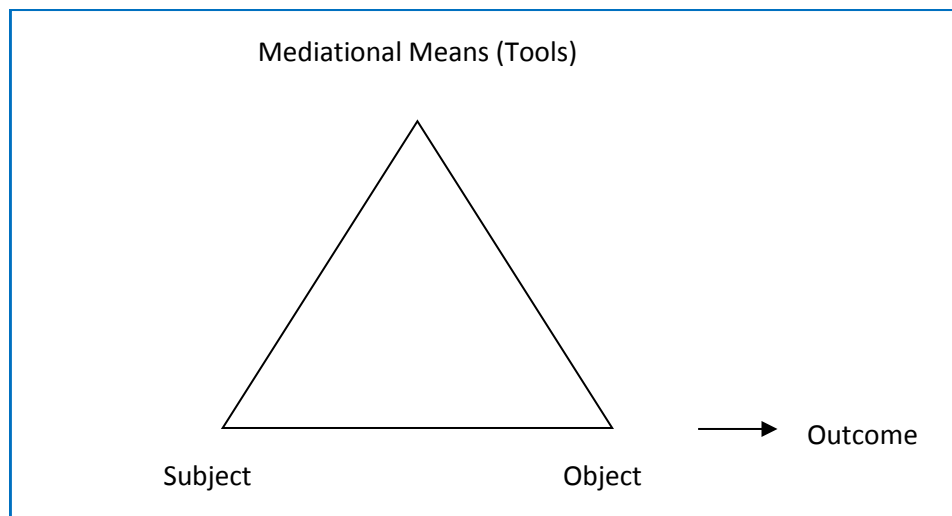


Figure 4-1 Engeström's First Generation activity theory model (based on Daniels (2001, p. 86)

Engeström then developed this model to acknowledge that individual actions, the tools used and outcomes are related to; the wider context, historical, cultural and social factors and the sharing of the activity with other individuals (Leadbetter, 2008). This is shown in Figure 4-2.

Within this second generation activity theory a number of features of the activity system, which impact upon the object of the system, are identified. Once the features of an activity system have been identified any contradictions within and between the features can be identified. It is the resolution of these contradictions which can 'engender homeostatic processes within activity systems, which thereby change and develop over ... time' (Roth & Lee, 2007, p. 204).

A third generation of activity theory has also been developed to depict the multiple perspectives and contexts occurring in the interaction between two activity systems. This study will, however, use second generation theory to focus upon one activity system.

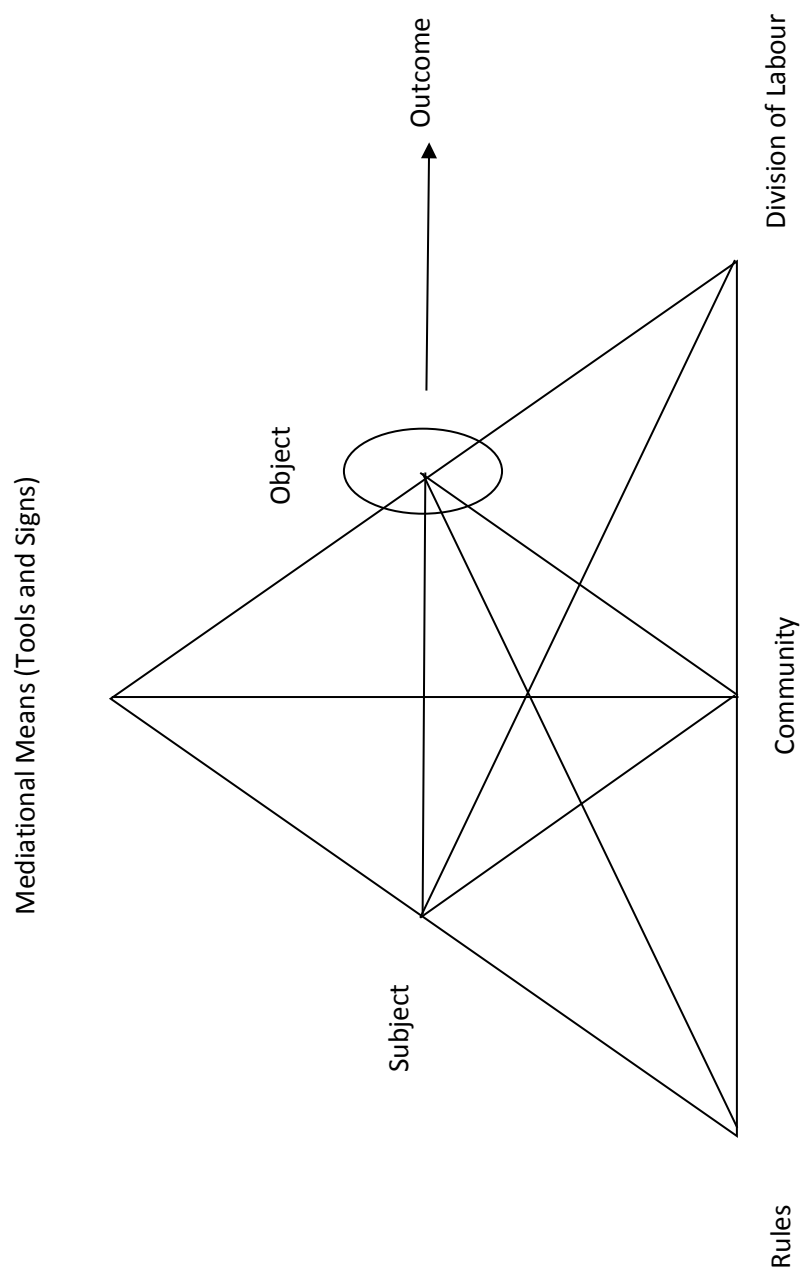


Figure 4-2 Second Generation Activity System Model (based on Daniels (2001, p. 89))

4.1.2.2 The rationale for the use of activity theory in this research

Activity theory has been promoted as a useful tool for EPs (see Educational and Child Psychology (2005) Vol 22.No.1; Leadbetter (2005, 2008); Leadbetter, Daniels, Edwards, Martin, Middleton, Popova, Warmington, Apostolov, and Brown (2007); Nussbaumer (2011)). Leadbetter (2008) suggests that activity theory can be used as a descriptive framework, analytic device or organisational development approach. She also suggests that the approach should be commended to EPs because it reinforces the importance of viewing the individual or group as acting within a particular context and environment whilst being based upon a widely respected theoretical background.

Within this research activity theory is used as both a descriptive and an analytic device in order to consider how FRIENDS has been delivered within a mainstream secondary school. An alternative would have been to conduct a thematic analysis of a number of interviews about the implementation of FRIENDS. Thematic analysis is “a method for identifying, analysing, and reporting patterns (themes) within data” (Braun & Clarke, 2006, p. 6). Analysis of a number of interviews would have allowed pertinent themes, e.g., around implementation, to be identified, primarily on the basis of these themes appearing across the data set. However, with only one interview available, it was not possible to conduct a thematic analysis. With only one interview another possibility would have been to conduct a narrative analysis of the ‘story’ presented by the learning mentors (Mertens, 2010). It was felt by the researcher, however, that such an inductive approach may neglect aspects of the context which had not been identified by the learning mentors as important. Instead the author viewed the use of a theoretical framework, i.e., activity theory, to provide a structured analysis of the interview as preferable in providing analysis of the data in systematic way. It also enabled conclusions to be drawn from the data in a manner easily communicable to other people adding to the ‘dependability’ of these conclusions. The use of

the activity theory framework may also support comparison with future evaluations using a similar method of analysis.

It was hoped that the contradictions identified will become starting points for developmental work improving the delivery of the FRIENDS programme through TAMHS. Nussbaumer (2011) also suggests that the rich description provided by the use of activity theory enables practitioners to identify features of the research context similar to their own. This enables the use of non-generalisable data to illuminate similar educational situations.

There are limitations of the approach:

Firstly, activity theory has been criticised for failing to address primary contradictions, such as political issues or 'use value' and 'exchange value', and instead focusing on secondary contradictions which are more 'amenable to localised resolution' (Avis, 2009, p. 161). Within the current study, however, the pragmatic approach employed suggests that it is appropriate to conduct evaluation at this secondary contradiction level at which intervention may be possible.

Secondly, Bakhurst (2009) suggests that activity theory is a useful heuristic for analysing activity but expresses reservation about the extent to which it can be used to analyse *any* activity and urges caution about the assumptions researchers may have that their research has a sound, unproblematic theoretical underpinning. He encourages users to look for contradictions between the model and the subject matter as well as within the activity system itself. In the context of the current study activity theory was felt by the author to be a useful and appropriate method of analysis.

Finally, Leadbetter (2008) acknowledges that methods of understanding and analysing language within activity systems are underdeveloped whilst the role of the subject can be underplayed in the analysis. Whilst the study did not have the scope to explore language, the role of the subject was explored in the context of the analysis.

4.1.2.3 The process of analysis

The recording of the semi-structured interview was transcribed by the author. The elements of the second generation activity systems (see figure 4.2) were then used as a priori themes, instances of which were then searched for in the transcript and highlighted in different colours (see Appendix 18). The records of the reasons for pupil selection and the organisation of the TAMHS programme were also considered in relation to these headings. The information identified was used to add detail to the activity systems diagram (see Figure 4.4). Once the features of the activity system had been described, the relationships between the features were considered and contradictions identified. It should be noted that this was the work of a single researcher and the conclusions could be strengthened if a similar analysis had been conducted by a colleague and the similarities and differences considered.

4.2 Results relating to Research Question 1

4.2.1 How was the programme implemented?

The findings are described below with reference to aspects of programme integrity shown in italics (Dane & Schneider, 1998; Durlak & DuPre, 2008)(see Table 3.6).

The FRIENDS sessions delivered in school lasted up to one hour whilst the Manual suggests 1.5 -2 hour sessions. The proportion of the suggested activities completed during the FRIENDS sessions varied from 0-87% (see Figure 4-3). Session 10 did not take place as the decision was taken to close the school early for the summer holidays. Overall 59.6% of the suggested programme was delivered. Attendance of the participants varied from 7 -9 sessions. This suggests that both *exposure* and *adherence* to the programme were less than ideal.

Qualitative analysis of the delivered programme (see Appendix 17) suggested that some aspects of the programme were delivered with high levels of fidelity to the programme. In particular;

- every week participants had to identify something which had gone well, encouraging positive thinking and identification of good experiences,
- participants spent a lot of time learning relaxation techniques,
- participants learned about recognising emotions and about coping supports and methods.

However a number of aspects of the programme were not delivered. In particular it appeared that;

- participants spent much less time than is recommended learning about, and applying, the process of identifying negative thoughts and changing them into positive thoughts;
- there was limited time spent on the coping step plan and few opportunities for participants to develop coping step plans in relation to their own challenges;
- the section on being a friend and offering support to others was omitted;

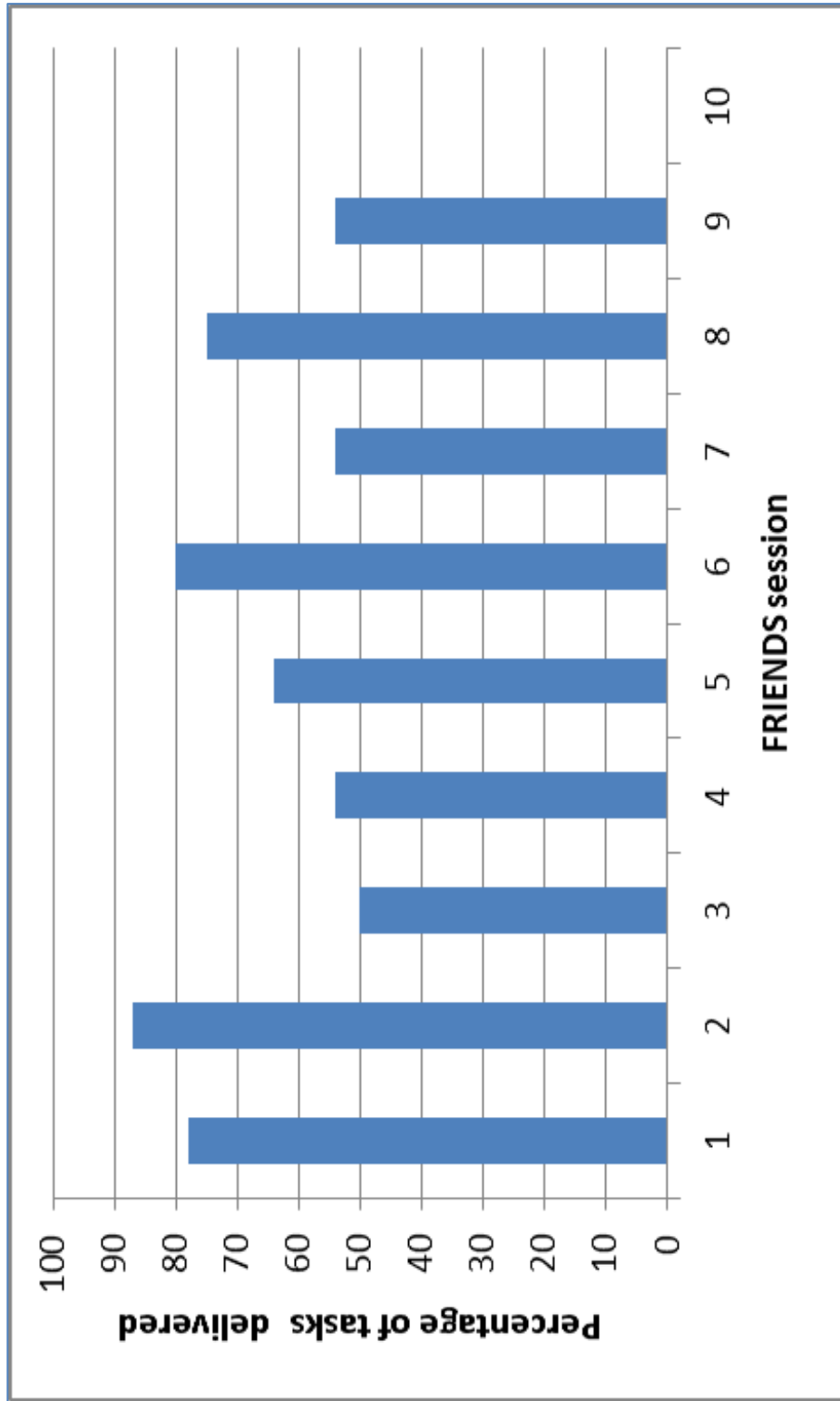


Figure 4-3 A bar graph showing the proportion of activities suggested in the Manual which were delivered each session

- there was no opportunity for participants to try the 6 block problem solving plan for themselves.

Again these results suggest *adherence* was lower than had been hoped for and considerable programme *adaptation* had occurred.

The interview with the learning mentors (See interview transcript in Appendix 18) suggested that they felt confident, prepared to deliver the programme following training, and enthusiastic (line references shown in brackets) e.g.

‘...definitely ready, we couldn’t wait to get started, it seemed um really exciting’ (line 16-18).

Although this should positively affect the *quality of delivery* there was no direct observation and measurement of delivery quality.

The interview also suggested a positive response from the participants e.g.

‘...they began to open up’ (line 79),

‘That was good, they enjoyed that didn’t they?’ (line 251) ,

‘their answers got a little bit more ..they had more to say’ (line 275-6).

It should be noted that this apparent *participant responsiveness* is from the viewpoint of the learning mentors and not triangulated with other information.

Overall it appeared that participants were engaged and the learning mentor enthusiastic. The participants had the opportunity to learn about most of the skills developed in FRIENDS but the programme adaptation limited exposure and adherence and resulted in lost opportunities to practise using the skills and generalising them to their own situations.

4.2.2 How did features of the context impact upon the delivery of the programme?

Analysis of the interview transcript and information regarding the selection and aims for individual participants was used to produce a second generation activity theory model of the implementation of FRIENDS in this research setting (see Figure 4-4). The features and contradictions of the system are outlined in the next section.

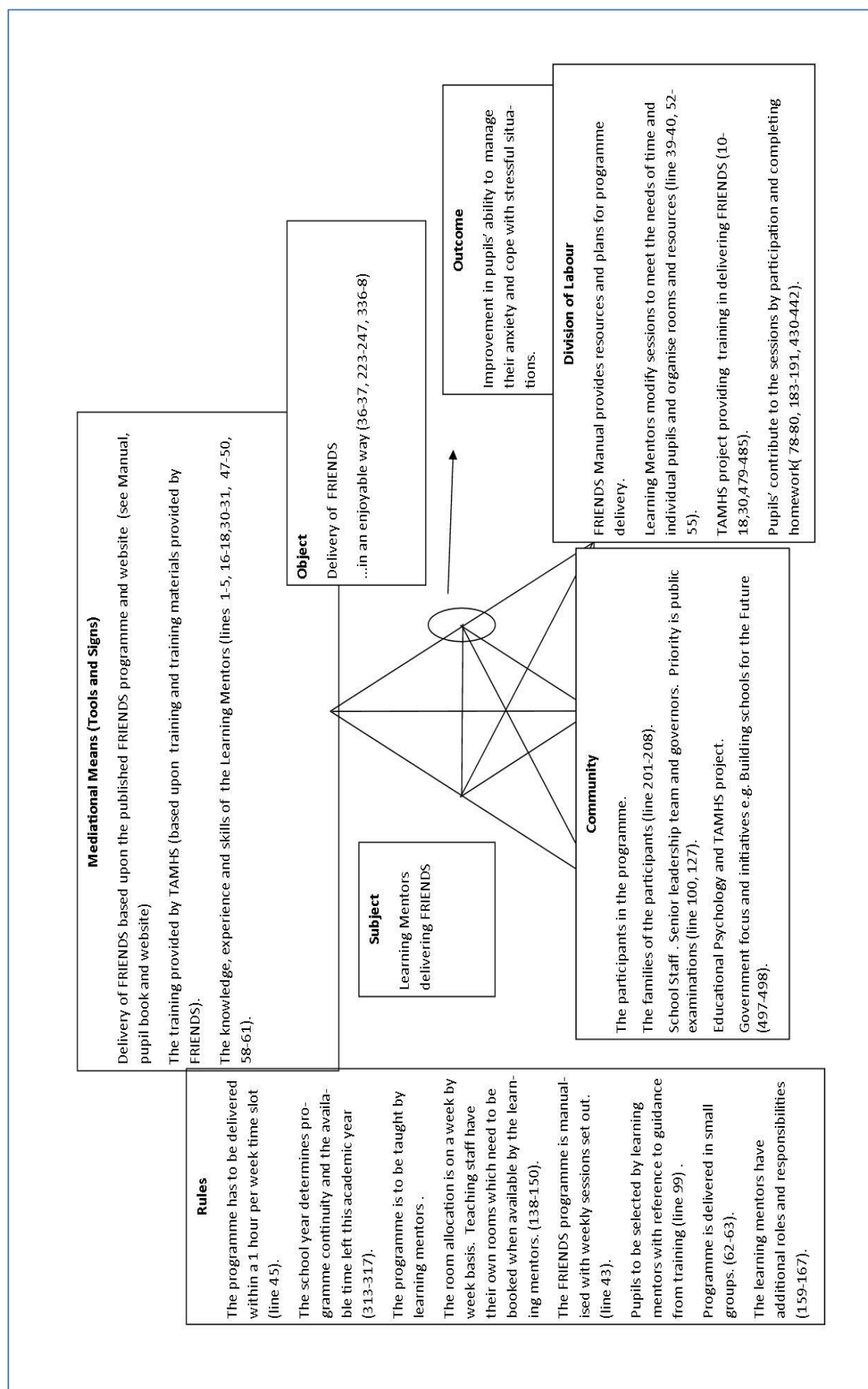


Figure 4-4 A 2nd Generation Activity System depicting the implementation of FRIENDS in the current research context

4.2.2.1 *The Features of the Activity System*

Object: The object of the activity system was identified as the delivery of FRIENDS to a group of pupils. The pupils had been identified by the learning mentors as suitable beneficiaries of the programme due to aspects of behaviour observed in school. These are outlined further in the individual case studies of the pupils participating. Consideration of the results of the Spence Children's Anxiety scale would suggest that not all of the participants had elevated levels of anxiety.

An additional objective became apparent during the interview as the learning mentors were keen that participation in the programme be an enjoyable experience for the pupils.

Outcome: The outcome and motivation for the system varied for each participant but it was felt by the learning mentors that the ability to manage anxiety and cope with stressful situations was important for each child. The actual outcomes were measured using commercially available self-report measures (PI ED, Kidcope and SCAS) as well as evaluation by the learning mentors.

Subject: The subject of the activity system was the learning mentors who were delivering FRIENDS. They hold an active role in the activity system as they deliver the programme. The characteristics of the learning mentors included that they were women aged 40-50 who appeared to have a maternal role within school, nurturing and caring for the young people and accepting them as individuals.

Tools: There are a number of tools mediating the delivery of FRIENDS. Some of these are fixed resources such as the published FRIENDS programme and the training received

through the TAMHS project. These tools will be the same in other schools.

The knowledge, skills and experience of the learning mentors provide a further tool. Both the learning mentors had previously delivered group interventions within the school, had been at the school for a number of years so were familiar with the context, systems, priorities and ethos of the school and also had prior knowledge of some of the pupils participating in FRIENDS. Neither of the learning mentors were qualified teachers. The learning mentors stated that they felt ready and excited to deliver the programme (16-18). This tool will vary in different schools and can be altered with additional support.

Rules: A number of rules were identified as impacting upon the activity system. Some of these were rules imposed by TAMHS e.g. the programme was delivered to a small group of students rather than a whole class. This was a recommendation from the TAMHS training based on previous experiences of delivering FRIENDS.

Other rules related to the organisation of the delivery of FRIENDS within school. The programme was delivered by learning mentors rather than a qualified teacher, which may have resulted in a qualitatively different delivery compared to delivery by qualified teachers. The programme was allocated one 60 minute lesson a week for delivery, which is less than the Manual suggests.

Systems within the school also become rules of the activity system. For example, the location of the lesson was determined by weekly availability of rooms rather than a room being allocated for the duration of the programme.

This room was then booked using the school system in which teaching staff have their own rooms which are available for other staff to book when the room is not in use. Not having a regular room reduced the opportunity to reinforce concepts using displays.

Similarly the role of the learning mentors within school becomes a role contributing towards the activity system. Their time to deliver the programme was not protected and other elements of their role, such as being first aiders or supporting transition arrangements and trips, were prioritised.

Other rules are created beyond the school context. The organisation of the school year reduced the length of time the programme could continue for and dictated breaks in the programme due to the Easter and Whitsun holidays.

Community: The community involved in the delivery of the FRIENDS intervention can be viewed as including the participants in the programme, who are active participants, and their families, their peers and the wider school community such as staff and governors who are more passive members of the community. In addition, the EPS and the TAMHS project form part of the community influence on delivery of FRIENDS as do LA perspectives and government priorities and initiatives such as the Building Schools for the Future project.

Division of labour: The primary effort was undertaken by the learning mentors. Although previous work done by the developers of FRIENDS provided the programme, this was subsequently modified by the learning mentors. The role of the TAMHS training in supporting the modification and delivery of the programme also needs to be acknowledged.

In addition the pupils contributed towards the delivery of the programme through their engagement and contribution to sessions and completion of homework.

4.2.3 Contradictions within the activity system

A number of contradictions, when aspects of the activity centre are in conflict, were identified.

Tools and division of labour: There was a contradiction between the need for the learning mentors to plan the sessions (division of labour) and their experience and expertise (tools) .

There were also difficulties noted in the ability of the pupils selected to contribute to the group and their influence on the pace of the group (division of labour). This may reflect; the impact of anxiety on participation, the learning needs, and social skills of group member. The teaching skills of the learning mentors and their expertise, in terms of selecting, building and managing a group, may also contribute to this difficulty (tools).

Tools and Rules: An important contradiction was between the time available (rules) and the time required (tools) to deliver the programme. In addition to the reduced time allocation further time for programme delivery was lost due to the learning mentor's time being unprotected and poor implementation of the room booking system which resulted in last minute room changes (transcript lines 138-156).

In a further contradiction TAMHS advised delivering FRIENDS to small groups (rules) but the learning mentors found that some of the activities in the programme (tools) would have been easier to do with more students and a greater variety of students (lines 117-124)

Object and community: A contradiction was identified between the object of the programme and the community of the wider school system which holds additional goals such as the Building Schools for the Future project which impacted on room availability due to building works (lines 497-498) and also the importance of exam results which limits the amount of time the school will make available for extra-curriculum programmes such as FRIENDS for life.

Further contradiction between the community and the object was apparent in the lack of involvement of parents and the difficulties of involving parents in the homework activities (line 201) which subsequently impacted upon pupil contribution to the sessions. This may reflect the different priorities held within the community.

Object (internal) and object and tools: An internal contradiction was identified in the object of the activity system between the aim of delivering FRIENDS and the aim of making the sessions enjoyable (lines 36-37). The FRIENDS programme aims to develop pupils' resilience though encouraging them to tackle something they find challenging by using a coping step plan. The interview with the learning mentors identified times when pupils were allowed to avoid challenging situations, such as reading to the group (lines 245-247) so that they would continue to enjoy the programme. This may reflect the caring and nurturing role adopted by the learning mentors which avoided placing undue stress on the participant. These situations could have been identified as things to work towards using the coping skills taught. Failure to identify these opportunities, and notice these discrepancies, also highlights some contradictions between the tools (i.e.

experience and training) , the characteristics of the learning mentors, and the object (delivery of FRIENDS).

4.2.4 Summary of Research Question 1

Quantitative analysis of how FRIENDS was implemented revealed that around 60% of the manualised programme was delivered. Qualitative analysis of what was delivered suggested that some aspects of the programme were adhered to but a particular omission was the lack of opportunity for the participants to develop, practise and evaluate skills such as identifying and challenging negative thoughts, using coping step plans and trying problem solving plans. The quality of delivery may be viewed as unsatisfactory in some respects.

Consideration of the contextual factors and the activity system delivering FRIENDS suggested that contradictions across the system resulted in lack of time and insufficient expertise to deliver the programme with high levels of fidelity. Inappropriate selection of participants and lack of involvement by parents were also identified as factors limiting quality of implementation.

4.3 Analysis Relating to Research Questions 2 and 3

Question 2: Does FRIENDS, as implemented in a mainstream secondary school participating in a local authority TAMHS project, reduce emotional distress and anxiety in secondary aged children identified by school staff as being anxious?

Question 3: Does FRIENDS, as implemented in a mainstream secondary school participating in a local authority TAMHS project change the coping skills of secondary aged children identified by school staff as being anxious?

Question 2 was addressed using data collected pre and post intervention and using a SCED.

Question 3 was addressed using a SCED.

4.3.1 Method of Analysis

4.3.1.1 Analysis of pre / post data

The Spence Children's Anxiety Scale (SCAS) (Spence, 1999) was used to assess levels of anxiety pre and post intervention. All schools participating in the local TAMHS project are encouraged to use this measure which is also widely used in published evaluations of FRIENDS.

The pre/post data for each subscale and the total were plotted for each participant. With group samples it would have been possible to use a *t-test* to identify significant differences pre and post intervention, however this is not appropriate for individual cases or for small sample sizes as fundamental parametric assumptions are likely to be violated (Barlow, Nock, & Hersen, 2009). In addition, the use of statistical tests to evaluate group treatment effects has been criticised for failing to identify the response of individual participants and for revealing the proportion of treated individuals who show improvement (Jacobson & Truax, 1991; Wise, 2004).

An alternative analysis can be provided by consideration of clinical significance (CS). CS has been defined as when “the client moves from the dysfunctional to the functional range during the course of therapy” (Jacobson et al., 1984, p. 340) . However, movement from dysfunctional to functional may result from unreliability in the measure used. Jacobson and Truax (1991) developed the Reliable Change Index (RCI) which indicates “whether change reflects more than the fluctuations of an imprecise measuring instrument” (p14). The less reliable the measure, the bigger the difference required to show a reliable change (Wise, 2004).

Alternative change indices have been developed and evaluated but the Jacobson-Truax method remains widely recommended and used (Wise, 2004).

RCI is calculated by subtracting the post treatment score from the pre-treatment score and dividing this by the standard error of the difference. A score above 1.96 indicates with 95% certainty that the pre and post scores reflect real change (Ferguson, Robinson, & Splaine, 2002). RCI is used with CS to identify four categories of treatment outcome (see table 4:1) (Wise, 2004).

Category	Outcome
Recovered	Passed Clinically Significant Change and Reliable Change Index
Improved	Passed Reliable Change Index alone
Unchanged	Passed neither
Deteriorated	Passed Reliable Change in negative direction

Table 4:1 Categories of Treatment Outcome using the Reliable Change Index (Wise, 2004)

The RCI was calculated for each participant using the Leeds Relative Change Calculator (Agostinis, Morley, & Dowzer, 2008) with reference to psychometric properties of the SCAS reported by Nauta (2005) and Spence et al. (2003) . The psychometric properties used are shown in Table 4:2.

Psychometric Property	Source of Information	Statistic used		
Test-Retest reliability co-efficient	Based on a subsample of 362 students 12 weeks after initial data collection (Spence et al., 2003)	0.63		
Mean (Standard Deviation) of Clinical Sample	Based on 543 anxiety disordered children (Nauta, 2005)		<i>Age 7-11</i>	<i>Age 12-16</i>
		<i>Boys</i>	31.4 (17.9)	28.7 (16.9)
		<i>Girls</i>	37.9 (18.0)	38.8 (17.8)
Mean (Standard Deviation) of 'normal' Sample	Based on 654 children in a community sample (Nauta, 2005)		<i>Age 7-11</i>	<i>Age 12-16</i>
		<i>Boys</i>	18.8 (11.6)	16.2 (9.4)
		<i>Girls</i>	25.8 (13.4)	21.7 (10.2)

Table 4:2 The psychometric properties of the Spence Children's Anxiety Scale used to calculate the Reliable Change Index

4.3.2 Analysis of Single Case Experimental Design

4.3.2.1 Visual Analysis

The traditional method of analysing single subject research data is to conduct a visual comparison, of the graphically presented results, across the different phases (Horner et al., 2005; Kazdin, 1984; Parker & Brossart, 2003). Comparisons are made of a number of features (see table 4:3).

Visual analysis has been criticised for having no formal decision rules (Nourbakhsh & Ottenbacher, 1994; Scruggs, Mastropieri, & Regan, 2006) but guidelines are available from the What Works Clearinghouse (see Kratochwill et al. (2010).

Visual analysis is the most commonly used technique for analysing single case research in published research (Baer, 1977; Kazdin, 1982; Kratochwill et al., 2010; Parker, Brossart, Vannest, Long, De-Alba, Baugh, & Sullivan, 2005; Scruggs et al., 2006; Smith, 2012). Kazdin (1982) suggests that this reflects the historical development of the method through experimental analysis of behaviour in tightly

Comparison	Explanation
Level / Mean	One way of comparing the level involves considering the level of performance at the start and end of the baseline and comparing this to the start and end of the intervention. Kratochwill et al. (2010) suggest that the mean is an appropriate method of comparing the level.
Trend	The trend refers to the rate of change of the dependent variable also known as the slope. This can be calculated in different ways.
Variability	This considers the stability of the data. In general the greater the variability the greater the difficulty in drawing conclusions from the data (Kazdin, 1982)
Overlap	This is the proportion of data in one phase which overlaps with data from a previous phase. The greater the separation the stronger the evidence of an intervention effect. There are a variety of methods of calculating this and subsequently producing effect sizes (Kratochwill et al., 2010; Parker, Vannest, & Davis, 2011).
Immediacy of change	The more instantaneous the change the more likely that the intervention was a causal factor in the change (Kazdin, 1982). The last three data points in the baseline phase are often compared with the first three data points in the next phase (Kratochwill et al., 2010).
Consistency of results across phases.	This considers the consistency of data across phases of the same condition such as ABAB designs.

Table 4:3 Areas of comparison considered during visual analysis (Kratochwill et al., 2010; Nugent, 2010)

controlled laboratory conditions. The argument for visual analysis is that for changes in the dependent variable to be visually identified they need to be relatively large and possibly clinically significant (Baer, 1977; Kazdin, 1982; Matyas & Greenwood, 1990; Scruggs et al., 2006). Nugent (2010) states “if you cannot see the differences between phases, then any differences that are there are not important enough to be concerned about”(p.16). The insensitivity of visual analysis to smaller changes in measures reduces the likelihood of Type I errors (false identification of an intervention effect) although possibly increases the number of Type II errors (failure to detect an intervention effect) (Baer, 1977).

Additionally, Scruggs et al. (2006) describe advantages of:

- confidence in the social significance of the research;
- the ability of the audience to make different interpretations of the presented data and;
- the long history of visually analysed SCED design contributing to intervention development;

as arguments supporting visual analysis.

However, concerns regarding the reliability of visual analysis have been raised. The increasing complexity of the contexts under investigation has made interpretation of results more challenging (Kazdin, 1982). Researchers have been found to disagree about the existence of intervention effects when visually analysing SCED data (Brossart, Parker, Olson, & Mahadevan, 2006; DeProspero & Cohen, 1979; Jones, Weinrott, & Vaught, 1978). Matyas and Greenwood (1990) found the proportion of Type I errors made by graduate students analysing 27 graphs varied from 16% - 84%, with the greatest number occurring when variability and serial dependence increased, whilst Type II errors ranged from 0%-22% and were mostly below 10%. Fisher, Kelley, and Lomas (2003) however criticised the methodology of Matyas and Greenwood for over inflating the number of Type I errors and found that these were more typically in line with those for Type II errors. This would still indicate that of 5 analysts, 1 would reach a different interpretation than the others. Scruggs et al. (2006) argue that ‘a methodology which lacks

consistently applied or understood evaluative criteria would appear to be limited in its contribution to scientific knowledge' (p.38).

This has resulted in the development of alternative and supplementary methods of analysis.

4.3.2.2 Statistical Analysis

It has been suggested that statistical tests may be useful to supplement visual inspection, particularly when there is an unstable baseline, in areas of new research where intervention effects may be weak, in contexts where limited experimental control is possible, where small changes may be significant and in contexts where results need to be shared with other professionals (Kazdin, 1982; Parker et al., 2005). Statistical tests are also useful for meta-analysis of a number of studies (Solanas, Manolov, & Onghena, 2010). Possible statistical tests are discussed below.

4.3.2.3 Statistical Significance Testing

Statistical tests, e.g. t-tests and Analysis of Variance (ANOVA), can be used to establish the existence of significant differences between phases. However, when using single case data one of the critical assumptions of these parametric tests, that data points are independent, may be violated (Barlow et al., 2009; Robson, 2002). The data is likely to be serially dependent meaning t-tests and ANOVA should not be applied. Additionally, these tests are usually used to compare means. This ignores upward or downward trends in the data. This may result in a significant difference between phases being identified instead of on-going trends in the dependent variable across phases (Kazdin, 1984). Nourbakhsh and Ottenbacher (1994) found that disagreements between statistical tests was high (48%-71% between two methods of analysis across 42 graphs) and increased when there was substantial overlap between points and when the intervention effects were less clear for visual inspection.

An alternative test, in the presence of serial dependency, is time series analysis (Kazdin, 1982; Nugent, 2010). Although this method does not assume that the data is independent, the large number of data points required (50 points during

the baseline phase) rules it out for most SCED studies (Barlow et al., 2009; Nugent, 2010; Robson, 2002).

Further alternative statistical tests require specific design characteristics. Randomisation tests can be used when different experimental conditions are randomly allocated over time and R_n Test of Ranks can be used in multiple baseline designs where interventions are applied to the baselines in random order (Kazdin, 1982; Robson, 2002).

These issues suggest that the use of tests, of statistically significant difference in the dependent variable between phases, is not straightforward and needs to be considered carefully at the design phase; such designs may not be possible for ethical and clinical reasons (Scruggs et al., 2006). An alternative has been suggested in the use of effect sizes.

4.3.2.4 Effect Sizes

Effect sizes report the 'magnitude and direction of difference between two groups' (Durlak, 2009, p. 917). Rather than indicating the degree to which any differences between two groups are due to chance, which is influenced by sample size, effect sizes can indicate the impact of an intervention on an outcome without being systematically affected by the size of the sample population (Brossart et al., 2006). A further advantage is that effect sizes include continuous, rather than dichotomous, measures of treatment and they are not unduly effected by sample size (Parker & Brossart, 2003).

There is increasingly an expectation that researchers will report effect sizes ; the American Psychological Association (APA) publication manual (APA, 2001) suggests that effect sizes should always be reported (Durlak, 2009; Fritz, Morris, & Richler, 2012; Olive & Smith, 2005).

Within SCED research, a variety of methods of measuring effect size exist. Parker et al. (2011) refer to multilevel models, advanced regression models and non-parametric models, which tend to focus on the overlap of data between phases.

There is no consensus on the most appropriate method to use (Kratochwill et al., 2010; Kratochwill et al., 2012; Parker et al., 2005). Different techniques produce quite different results (Parker & Brossart, 2003; Parker et al., 2005). Care has to be taken in the interpretation and comparison of effect sizes as they vary from one statistical technique to another and simple guidelines for effect size interpretation created for group designs are not applicable for SCEDs (Brossart et al., 2006; Parker et al., 2005). The effect sizes produced are also not directly comparable to those produced in group design studies (Kratochwill et al., 2012).

Scruggs et al. (2006) argue that statistical analysis should not replace visual analysis. In addition, if the goal of the intervention is to alter behaviour in a manner which can be recognised by relevant individuals this requires obvious behaviour change rather than statistically significant change.

Brossart et al. (2006) and Kratochwill et al. (2012) both indicate that it may be useful to use more than one effect size and to compare their sensitivity, but it would appear this may be more useful in adding to the understanding of effect sizes in SCED research than drawing conclusions based on effect sizes in a particular research context. Smith (2012) concludes that there is a need for further evaluation of analytic methods.

4.3.3 Rationale for the selection of analysis methods in this study

Time series graphs were plotted to show the PI-ED results, the active coping skills choices and the combined avoidant and negative coping skill choices for each participant. The avoidant and negative coping skill choices were combined as although avoidant coping strategies are sometimes appropriate they were not appropriate choices for the presented scenarios and were therefore viewed as a negative choice.

A trend line was added as this has been found to increase rater confidence and interrater reliability (Hojem & Ottenbacher, 1988). The trend was shown using an Ordinary Least Squares (OLS) Regression Line as recommended by Nugent (2010) calculated using Excel®. An alternative trend line, the split middle technique, was

rejected as it is recommended that there are 8-10 points in the baseline phase (Hojem & Ottenbacher, 1988; Nourbakhsh & Ottenbacher, 1994) which this study does not have.

The Mean, Level, Slope and Overlap were analysed visually and statistically using techniques described by Harbst, Ottenbacher, and Harris (1991). The components of the visual analysis undertaken are shown in Table 4:4.

Component	Description
Mean	The mean was calculated for each phase and the mean shift from one phase to the next was calculated by dividing the difference between the phases by the mean of the baseline phase. As the difference was calculated by subtracting the baseline from the intervention a positive value indicates an increase between phases and a negative value a decrease.
Level	The level was quantified by taking the last data point in the baseline phase and the first data point in the intervention phase. By dividing the larger number by the smaller a ratio describing the absolute change in level was produced.
Slope	The slope was calculated by the Excel® regression line. To show the change in slope between phases the slope for the baseline was subtracted from the intervention phase. The larger the number the larger the change in slope across phases.
Overlap	The spread of data points in the baseline phase was computed and the number of data points in the intervention phase which fell within this spread were calculated as a percentage of all the intervention data points. This figure shows the percentage of data points which overlap.
Variability	The fluctuation in the data points was noted. This was shown by reporting the standard deviation of each phase.
Immediacy of Change	This was not commented upon as the effects of the intervention are likely to be cumulative rather than resulting in an immediate change therefore absence of an immediate change does not indicate absence of intervention effect.
Consistency of results across phases	As an AB design was used this analysis was not possible.

Table 4:4 Description of the components of the visual analysis report

In order to increase the reliability of the analysis a colleague familiar with undertaking SCED analysis was asked to rate the data presented for each individual using a five point scale judging;

“How certain or convinced are you that the child’s responses underwent a practical and significant improvement from the baseline to the intervention phase” This phrase was based upon previous research and will be considered further in section 5.5.4 (Brossart et al., 2006; Parker & Brossart, 2003) (See Appendix 18).

The scale ranged from 1 – *not at all convinced* to 5 - *very convinced*. The improvement referred to the desired direction of change namely a decrease in anxiety, an increase in the selection of active coping strategies and a decrease in the selection of avoidant and negative coping strategies.

Interrater reliability for all of the graphs was calculated using a linear weighted version of Cohen’s Weighted Kappa (Cohen, 1968). (See Appendix 19).

The interrater reliability was found to be 0.71 ($p < 0.001$), 95% CI 0.49-0.94. See table 4:5 for score interpretation.

Kappa	Interpretation
< 0	Poor agreement
0.0 – 0.20	Slight agreement
0.21 – 0.40	Fair agreement
0.41 – 0.60	Moderate agreement
0.61 – 0.80	Substantial agreement
0.81 – 1.00	Almost perfect agreement

Table 4:5 Cohen’s Kappa score interpretation (Landis & Koch, 1977)

This score indicates a substantial agreement between raters increasing confidence in the conclusions reached regarding the efficacy of FRIENDS on the measures taken.

4.3.4 Effect size

An effect size was not calculated. The author felt that although there is a clear rationale for reporting effect sizes there is no consensus about which effect size to

report as they all have limitations and are likely to produce varied results. It was felt that the argument for visual analysis is strong and in the event of conflicting results between visual analysis and effect size it would be inappropriate to draw conclusions based upon effect size whilst understanding the weaknesses of the method. It would therefore be equally wrong to accept effect sizes which were in agreement with the visual analysis. On this basis it was decided to exclude effect size analysis from the evaluation.

4.4 Results relating to research questions 2 and 3

The results for each participant have been presented individually using the following format:

1. A description of the participant (all names have been changed) from information collected from the learning mentors, the SENCO and school records. In addition the learning mentors were asked, as part of the interview and feedback, how they felt individual participants had responded.
2. A bar graph showing the results of the Spence Anxiety Scale Pre and Post participation in the study including treatment outcome analysis.
3. A time series graph and supporting information for visual analysis of the PI ED during baseline and intervention phases.
4. A time series graph and supporting information for visual analysis of the active coping skills chosen in response to vignettes during baseline and intervention phases.
5. A time series graph and supporting information for visual analysis of the negative and avoidant coping skills chosen in response to vignettes during baseline and intervention phases.
6. A summary of the results for that participant.

4.4.1 Participant 1: Aaron

Aaron is a 13 year old boy in year 8. He is a talented footballer and plays for an academy of a local premiership football team.

In school he struggles with his literacy and is performing at a low level 3 for reading and writing. His progress is described as very slow and he has been identified as School Action on the SEN code of practice. His targets on his Individual Education Plan (IEP) are in the areas of reading, spelling and using basic punctuation.

Aaron was selected for the FRIENDS intervention because he can be quite aggressive and is involved with conflict with his peers. He is reported to struggle to control his anger. This could be identified as emotional distress as 'fast and sustained physiological arousal' is a risk factor for anxiety and 'irritability' is a risk factor for depression (see table 3.7). It was hoped that participation in FRIENDS would help Aaron to cope with his emotions more appropriately.

Aaron's attendance is 95.5% but he attended only 7 of 9 FRIENDS sessions.

The learning mentors reported that they felt Aaron's behaviour had changed a lot since he began the FRIENDS programme. They felt he had matured and was better at maintaining his self-control (personal conversation).

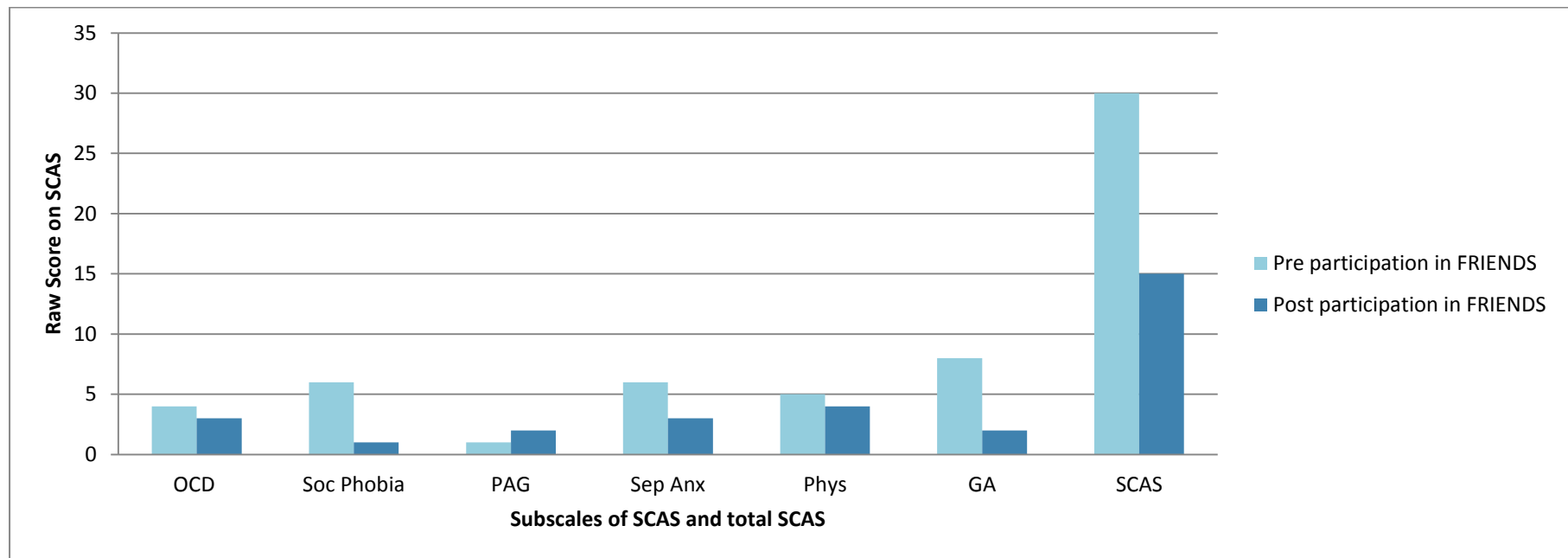


Figure 4-5 A bar graph showing Aaron's SCAS results pre and post participation in FRIENDS

Pre-Participation total SCAS score	Post-Participation total SCAS score	Clinically Significant Improvement (Yes / No)	Relative Change Index (sig = >1.96)	Treatment Outcome category
30	15	No	1.03	Unchanged

Table 4:6 A table showing Aaron's treatment outcome analysis

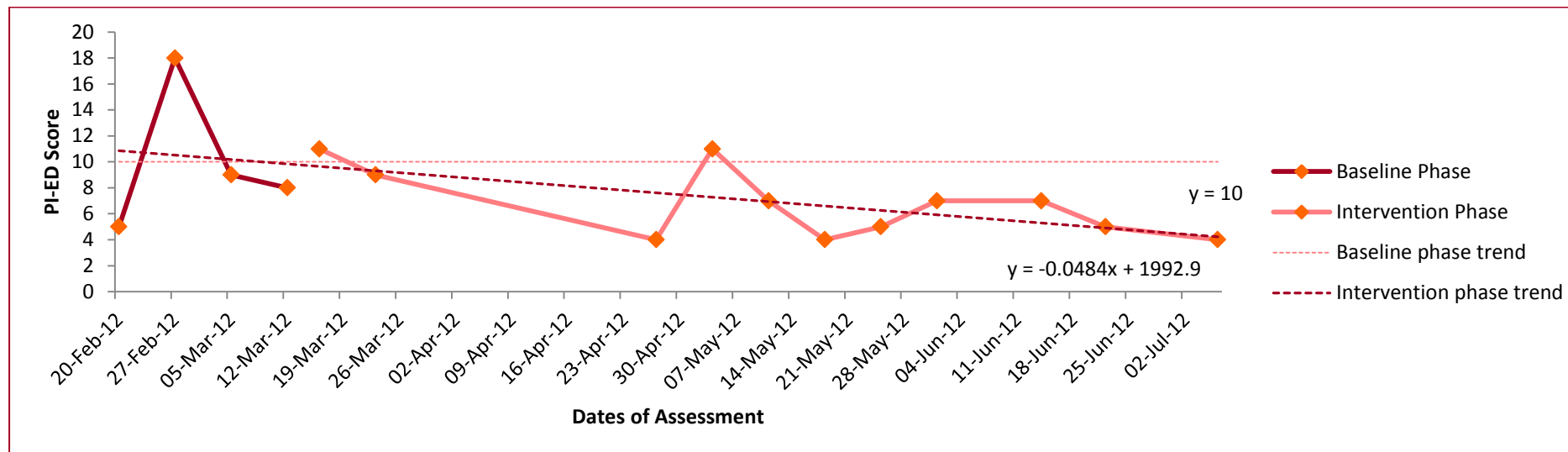


Figure 4-6 A graph showing Aaron's PI-ED scores during baseline and intervention phases

Mean	The mean of the baseline (10) was higher than that of the intervention (6.73).	Change in phase mean	= - 0.327
Level	There was small increase in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 1.375
Slope	The baseline phase had a level trend (0) whilst there was a gradual decline in data points during the Intervention Phase (-0.04).	Magnitude of slope change	= 0.04
Overlap	The intervention phase had considerable overlap with the baseline phase.	Percentage of data points overlapping	= 72.7%
Variability	The range of the data was much larger in the baseline phase than the intervention phase. The variability also decreased from baseline to intervention.	Range of data (and Standard Deviation) In Baseline Phase	= 13 (5.6)
		Range of data (and Standard Deviation) In Intervention Phase	= 7 (2.65)

Table 4:7 Summary of Visual Analysis of Aaron's PI-ED Scores

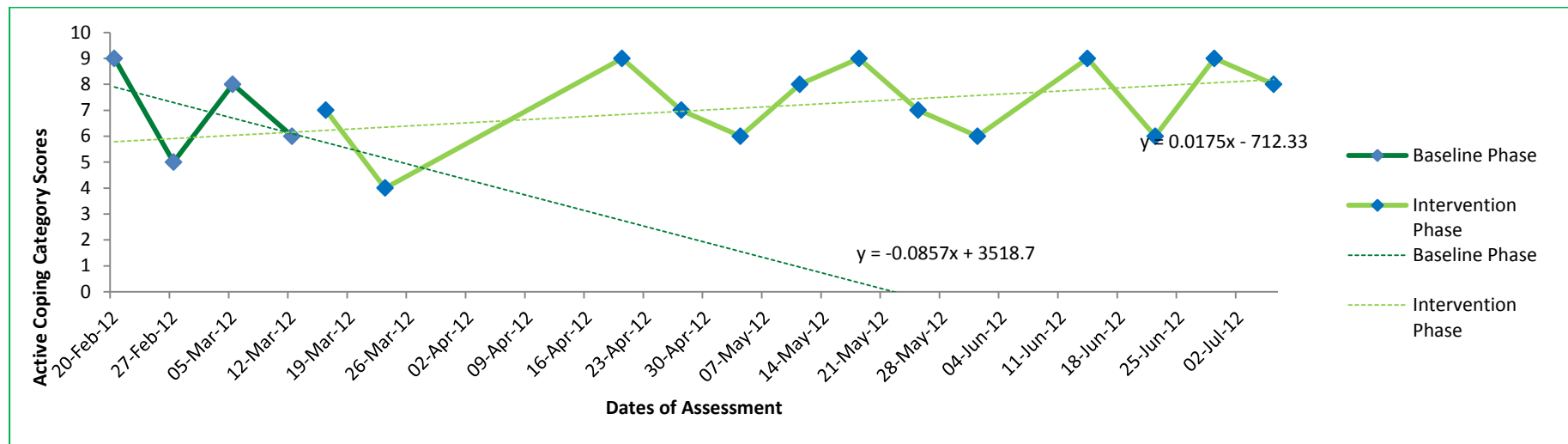


Figure 4-7 A graph showing Aaron's selection of active coping skills on Kidcope before and during participation in FRIENDS

Mean	There was only a small difference in the phase means. The mean in the baseline phase was 7. The mean in the intervention phase was 7.3.	Change in phase mean	= 0.043
Level	There was small increase in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 1.16
Slope	In the baseline there is a very gentle decelerating trend (-0.08). During the intervention phase there is a very small acceleration in the trend (0.02).	Magnitude of slope change	= 0.1
Overlap	Most of the data points in the intervention phase overlapped with the baseline phase.	Percentage of data points overlapping	= 92.3%
Variability	The range of data points was similar across the phases. There were similar amounts of variability in the data in the baseline and intervention phases.	Range of data and Standard Deviation In Baseline Phase	= 4 (1.83)
		Range of data and Standard Deviation In Intervention Phase	= 5(1.55)

Table 4:8 Summary of Visual Analysis of Aaron's active coping skills on Kidcope before and during participation in FRIENDS

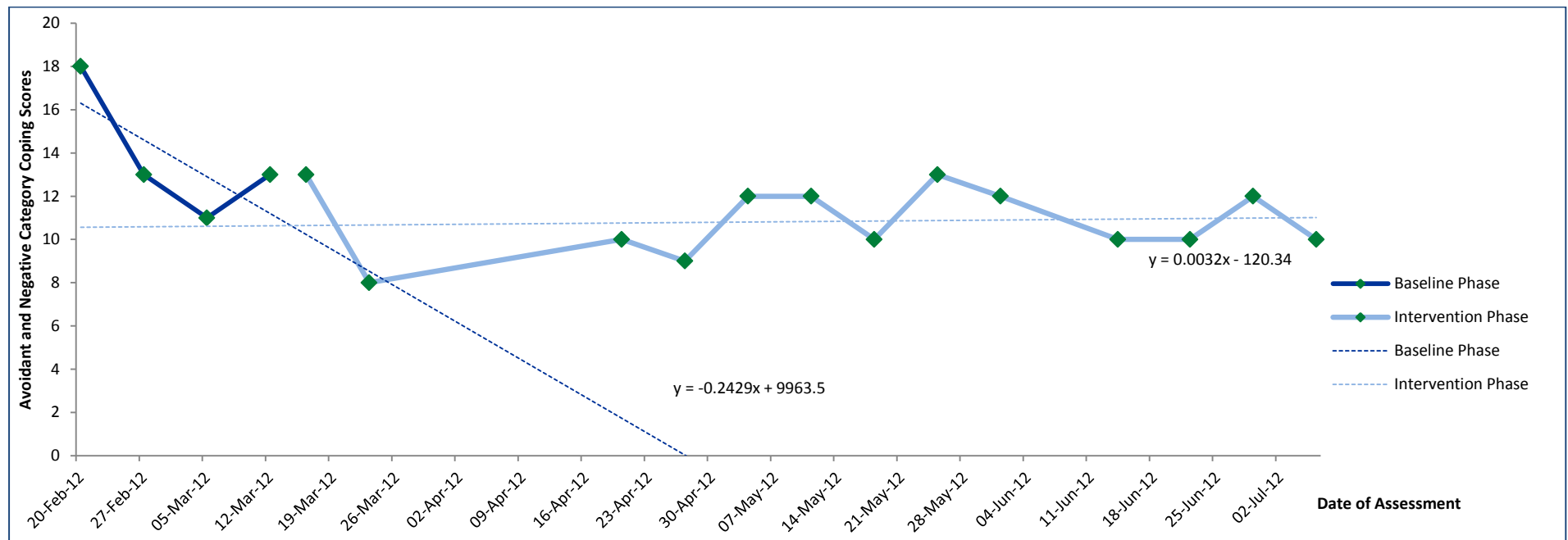


Figure 4-8 A graph showing Aaron's selection of avoidant and negative coping skills during participation in FRIENDS

Mean	There was a small reduction in the phase means between baseline and intervention phases. The mean in the baseline phase was 13.75. The mean in the intervention phase was 10.85.	Change in phase mean	= -0.21
Level	There was no change in level (0.0) between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 0.0
Slope	In the baseline there is a decelerating trend (-0.24). During the intervention phase slope is almost level (0.01).	Magnitude of slope change	= 0.25
Overlap	The majority of points in the intervention did not overlap with the baseline.	Percentage of data points overlapping	= 46%
Variability	The range of data points and the variability appeared slightly greater during the baseline than the intervention stage.	Range of data and Standard Deviation In Baseline Phase	= 7 (2.99)
		Range of data and Standard Deviation In Intervention Phase	= 5 (1.57)

Table 4:9 Summary of Visual Analysis of Aaron's avoidant and negative coping skills during participation in FRIENDS

4.4.1.1 Aaron – Results Summary

4.4.1.1.1 Anxiety

Aaron's initial score on the SCAS was 30. This would suggest that Aaron is not experiencing elevated levels of anxiety.

The SCAS results indicated a reduction in anxiety across all subscales with the exception of Panic Agoraphobia which showed a slight increase. Overall, Aaron's total reported anxiety level had halved but this response is rated by CS and RCI as *unchanged*.

4.4.1.1.2 Emotional Distress

The results of the PI ED suggest a slight reduction in levels of emotional distress with a fall in the phase mean and a slight decelerating trend in the intervention phase. However, the high levels of variability in the baseline phase and the high percentage overlap mean that it is difficult to be certain that a significant improvement has occurred, although it is a possibility.

4.4.1.1.3 Active Coping Skills

Visual analysis revealed that the phase means, range, variability and trend lines varied only slightly between phases. Additionally, most data points overlapped between phases. It was decided that it was not at all convincing that there had been an improvement in the selection of active coping skills between baseline and intervention phases.

4.4.1.1.4 Negative and Avoidant Coping Skills

Visual analysis suggested a slight reduction in the phase mean and the majority of data points during the intervention phase were below the baseline data points. There was, however, no downward trend during the intervention phase which does not suggest a reduction in selection of negative / avoidant coping strategies. It seems uncertain, therefore, that there had been a practical and significant improvement from the baseline to the intervention phase.

4.4.2 Participant 2: Benjamin

Benjamin is an 11 year old boy in year 7.

In school he is reported to struggle with his literacy and is achieving at level 2 for reading and writing. His progress is very slow and he has been identified as School Action Plus on the code of practice. His targets on his IEP are in the areas of writing and spelling. He also has a target to talk to other members of a small group.

Benjamin was selected to participate in FRIENDS because he is a very quiet and withdrawn student. He is reported to rarely speak to adults or to contribute within class, although he is more talkative with his friends. The learning mentors hoped that participation in FRIENDS would help Benjamin to use coping skills to contribute more to class discussion and to speak to school staff.

Benjamin's attendance is 96.4% for the school year and he attended 8 out of 9 FRIENDS sessions.

The learning mentors reported that they felt Benjamin was more vocal in the sessions since he began the FRIENDS programme. In addition, he had built a relationship with another boy doing the programme (see Interview Appendix 18).

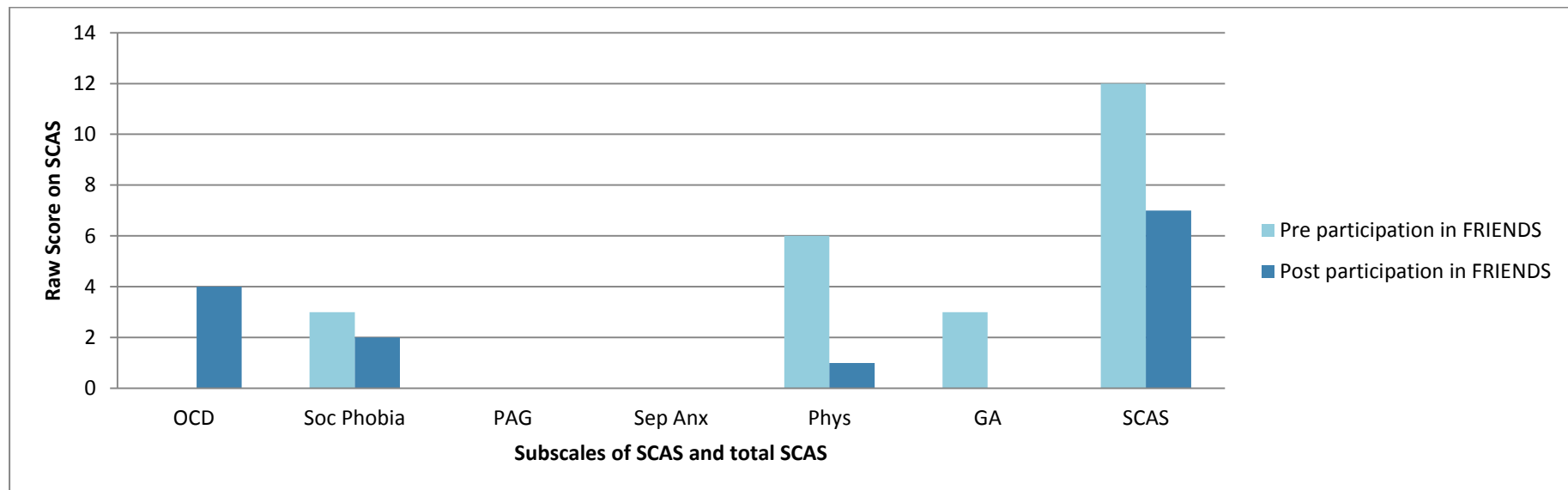


Figure 4-9 A bar graph showing Benjamin's SCAS results pre and post participation in FRIENDS

Pre-Participation total SCAS score	Post-Participation total SCAS score	Clinically Significant Improvement (Yes / No)	Relative Change Index (sig = >1.96)	Treatment Outcome category
12 (parent report 2)	7	No	0.32	unchanged

Table 4:10 A table showing Benjamin's treatment outcome analysis

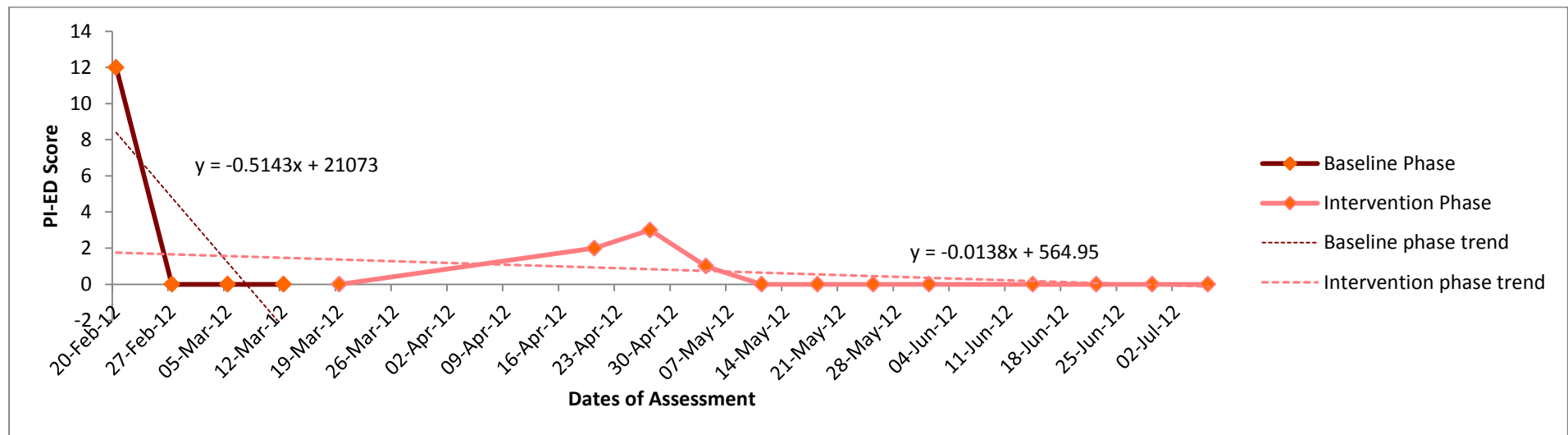


Figure 4-10 A graph showing Benjamin's PI-ED scores during baseline and intervention phases

Mean	The mean decreases from the baseline (3) to the intervention (0.5).	Change in phase mean	= -0.83
Level	There was no difference in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 0.0
Slope	The baseline phase had a steep decrease (-0.51) from one outlying data point whilst there was a very gradual decline in data points during the Intervention Phase (-0.01).	Magnitude of slope change	= 0.5
Overlap	100% of the intervention data points overlap with the baseline phase although this reflects scores at floor during both phases.	Percentage of data points overlapping	= 100
Variability	There was a large amount of fluctuation and a greater range in the baseline phase but the range is smaller and more stable during the intervention phase.	Range of data (and Standard Deviation) in Baseline phase	= 12 (6)
		Range of data (and Standard Deviation) in intervention phase	= 4 (1)

Table 4:11 Summary of Visual Analysis of Benjamin's PI-ED Scores

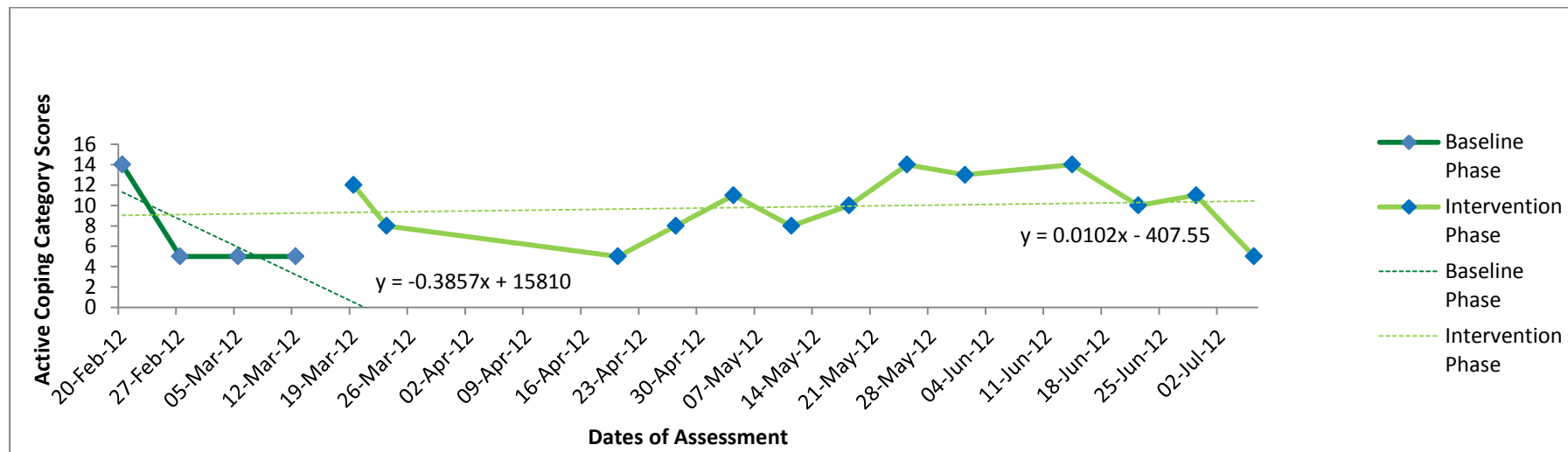


Figure 4-11 A graph showing Benjamin's selection of active coping skills on Kidcope before and during participation in FRIENDS

Mean	The mean in the baseline phase was 7.25. This increased to 9.92 in the intervention phase.	Change in phase mean	= 0.37
Level	There was an increase level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 2.4
Slope	In the baseline phase there is a clear decelerating trend (-0.3). During the intervention phase there is a very small increase in the trend (0.01).	Magnitude of slope change	= 0.31
Overlap	All of the data points in the intervention phase overlapped with the baseline phase.	Percentage of data points overlapping	= 100%
Variability	The range of scores was identical in the two phases but the variability decreased from baseline to intervention phase.	Range of data (and Standard Deviation) For Baseline phase	= 9 (4.5)
		Range of data (and Standard Deviation) For intervention phase	= 9 (3.01)

Table 4:12 Summary of Visual Analysis of Benjamin's active coping skills on Kidcope before and during participation in FRIENDS

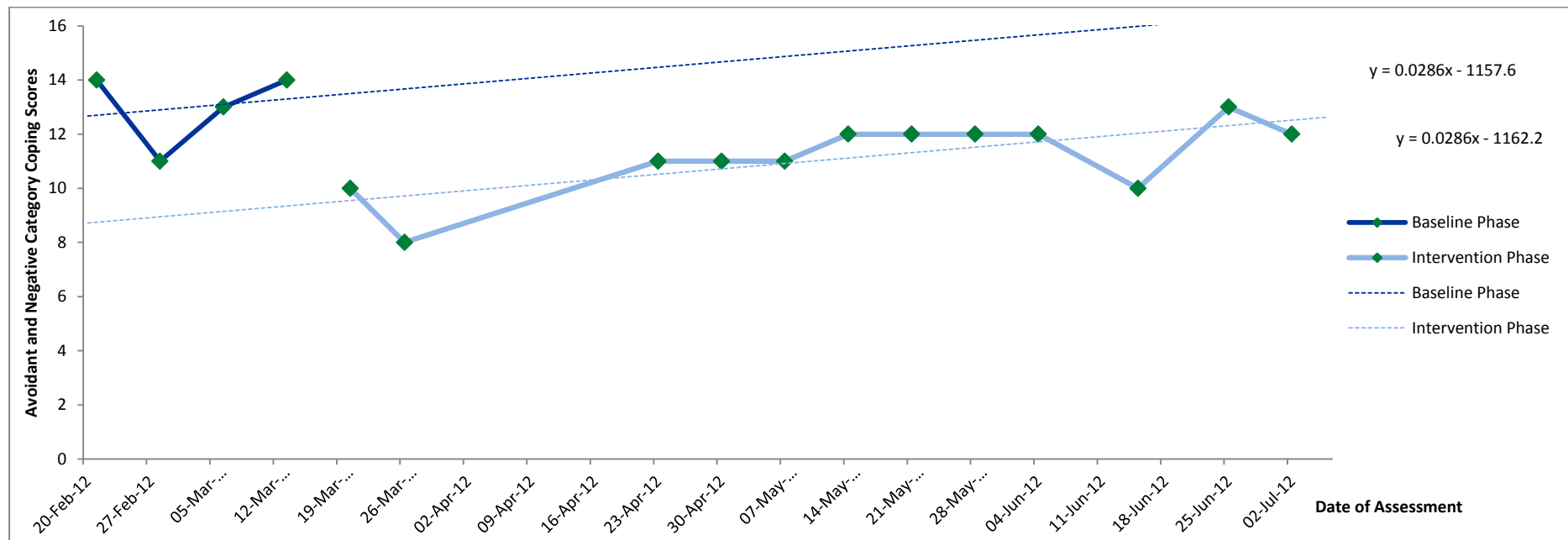


Figure 4-12 A graph showing Benjamin's selection of avoidant and negative coping skills during participation in the FRIENDS

Mean	There was a small reduction in the phase means between baseline and intervention phases. The mean in the baseline phase was 13.75. The mean in the intervention phase was 11.15.	Change in phase mean	= -0.19
Level	There was a clear change in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 1.4
Slope	In the baseline there is a slight accelerating trend (0.02). There is a similar slight acceleration trend (0.02) but at a lower level in the intervention phase.	Magnitude of slope change	= 0
Overlap	The majority of data points in the intervention phase overlapped with the baseline phase.	Percentage of data points overlapping	= 77%
Variability	The range of scores was similar in each phase but the variability decreased from the baseline phase to the intervention phase.	Range of data (and Standard Deviation) For Baseline phase Range of data (and Standard Deviation) For intervention phase	= 6 (2.5) = 5 (1.28)

Table 4:13 Summary of Visual Analysis of Benjamin's active coping skills on Kidcope before and during participation in FRIENDS

4.4.2.1 Benjamin – Results Summary

4.4.2.1.1 Anxiety

The SCAS results indicated a reduction in anxiety in the subscales of Social Phobia, Physical Injury Fears and Generalised Anxiety Disorder but an increase in Obsessive Compulsive Disorder. Benjamin's pre-participation total SCAS score was 12. The parent report of the SCAS generated a score of 2. Post participation his total SCAS had reduced to 7. As the pre-participation score was not elevated to clinical levels it was not possible to show a clinically significant improvement. The RCI is 0.32 which is less than the 1.96 required to say with 95% certainty that the change had not occurred by chance. The treatment outcome category is therefore *unchanged*

4.4.2.1.2 Emotional Distress

The results of the PI ED indicate levels of emotional distress at baseline levels (0) for 12 of the 15 data collection points. One outlying data point in the baseline phase resulted in a steep decelerating slope in the baseline phase. Without this data point the slopes would have been similar. The 100% data point overlap between phases suggests that it is not at all certain that a practical and significant improvement has occurred from the baseline phase to the intervention phase.

4.4.2.1.3 Active Coping Skills

Visual analysis revealed that the phase mean increased in the anticipated direction with a change from a decelerating trend to a slight accelerating trend in the intervention phase. All the data points overlapped between phases. It is uncertain that there had been an improvement in the selection of active coping skills between baseline and intervention phases.

4.4.2.1.4 Negative and Avoidant Coping Skills

Visual analysis suggested a reduction in the phase mean between phases but both phases had a slight accelerating trend. There was considerable overlap of data points between phases although this was due to the presence of one outlying data point in the baseline phase. It seems possible therefore that there had been a practical and significant improvement from the baseline to the intervention phase.

4.4.3 Participant 3: Chand

Chand is a 12 year old boy in year 8.

In school Chand is reported to struggle with his literacy and is achieving at level 3 for reading and writing. Staff have additional concerns about his behaviour and social interaction. Chand is identified as School Action Plus on the code of practice. His targets on his Individual Behaviour Plan (IBP) are to ignore distractions from other pupils and to refocus on his task after only one prompt, to complete all of his work and to ignore comments made to him by other pupils. Chand is reported to react to any perceived slight with anxiety and this tends to make him a target for other pupils. He is reported to dominate small groups and demand attention from the adults present. He has support from the Behavioural Support Service and has had involvement from the LA EP who supports the school. She had suggested to the school that he might find it useful to complete the FRIENDS intervention to help him cope with his anxiety levels and to be more positive in his interpretations of the actions of others.

Chand's attendance is 96.7% for the school year and he attended all of the FRIENDS sessions.

The learning mentors reported that they felt Chand was more independent and seeking less support from them following the participation in the FRIENDS programme (see interview Appendix 18).

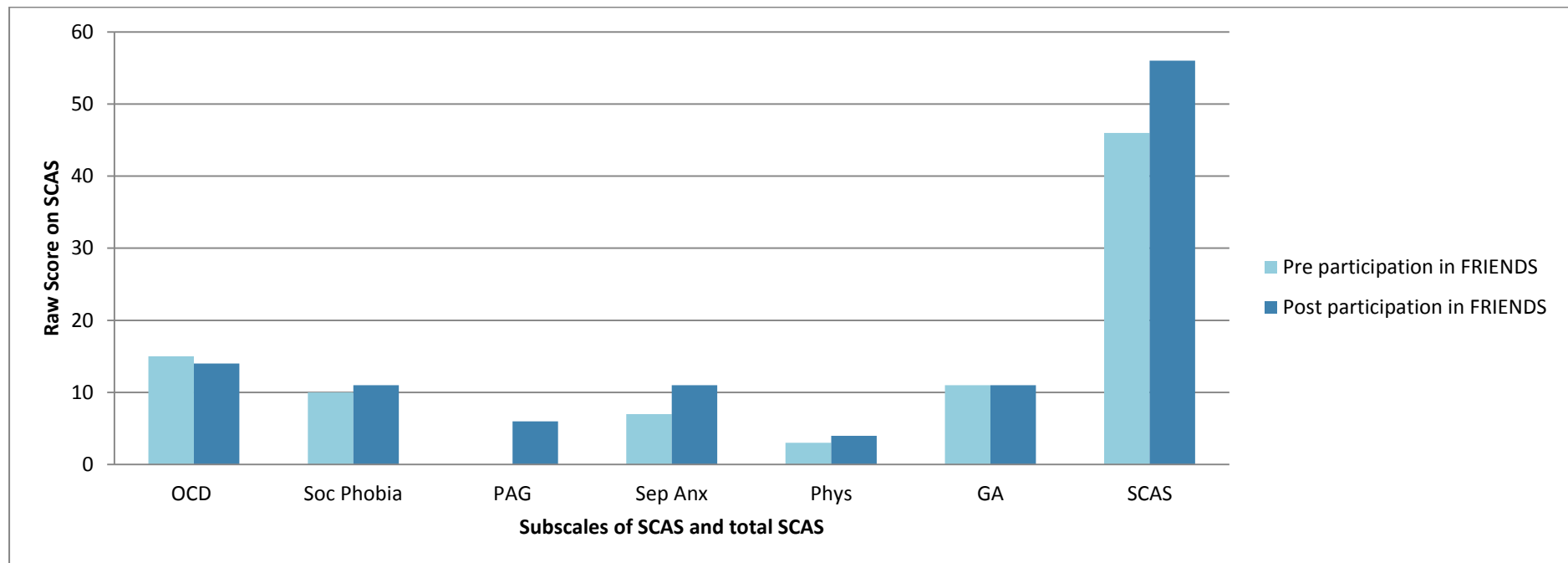


Figure 4-13 A bar graph showing Chand's results pre and post participation in FRIENDS

Pre-Participation total SCAS score	Post-Participation total SCAS score	Clinically Significant Improvement (Yes / No)	Relative Change Index (sig = >1.96)	Treatment Outcome category
46	56	No	-0.69	unchanged

Table 4:14 A table showing Chand's treatment outcome analysis

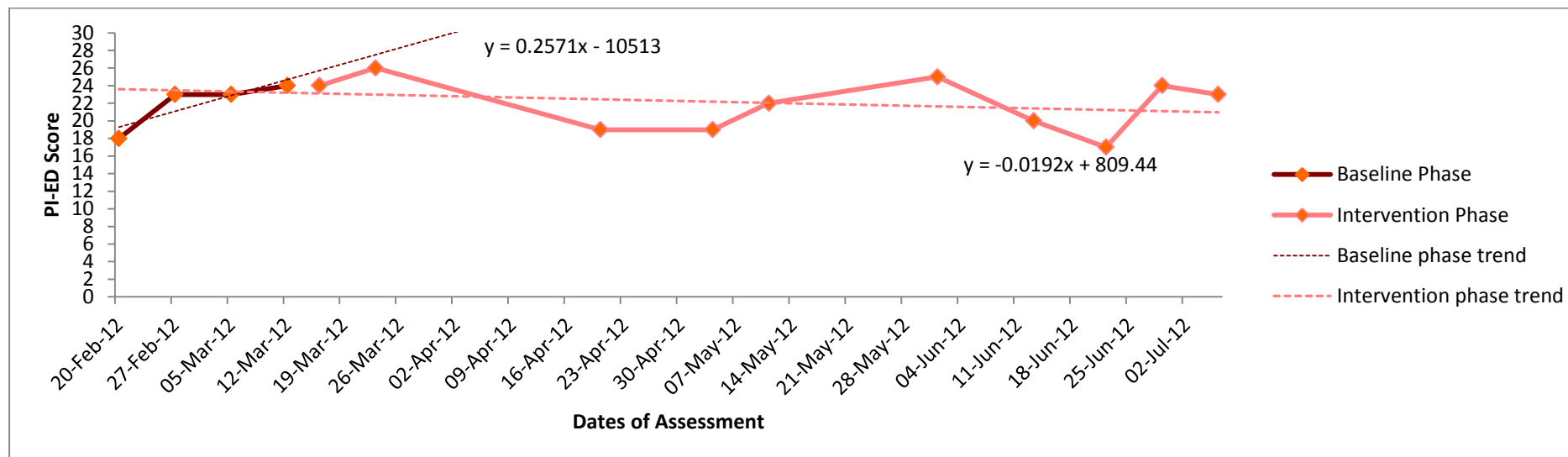


Figure 4-14 A graph showing Chand's PI-ED scores during baseline and intervention phases

Mean	There was negligible change in the phase means; mean of the baseline was 22 and of the intervention was 21.9.	Change in phase mean	= -0.00
Level	There was no change in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 0
Slope	The baseline phase had an increasing trend (0.2) whilst there was a gradual decline in data points during the Intervention Phase (-0.02).	Magnitude of slope change	= 0.22
Overlap	There was considerable overlap in data points between the baseline and intervention phases.	Percentage of data points overlapping	= 70%
Variability	The range increased from the baseline to intervention phase. The scores were reasonably stable during both phases although the standard deviation was slightly higher in the intervention phase.	Range of data (and Standard Deviation) In Baseline Phase	= 6(2.71)
		Range of data (and Standard Deviation) In Intervention Phase	= 9 (2.99)

Table 4:15 Summary of Visual Analysis of Chand's PI-ED Scores

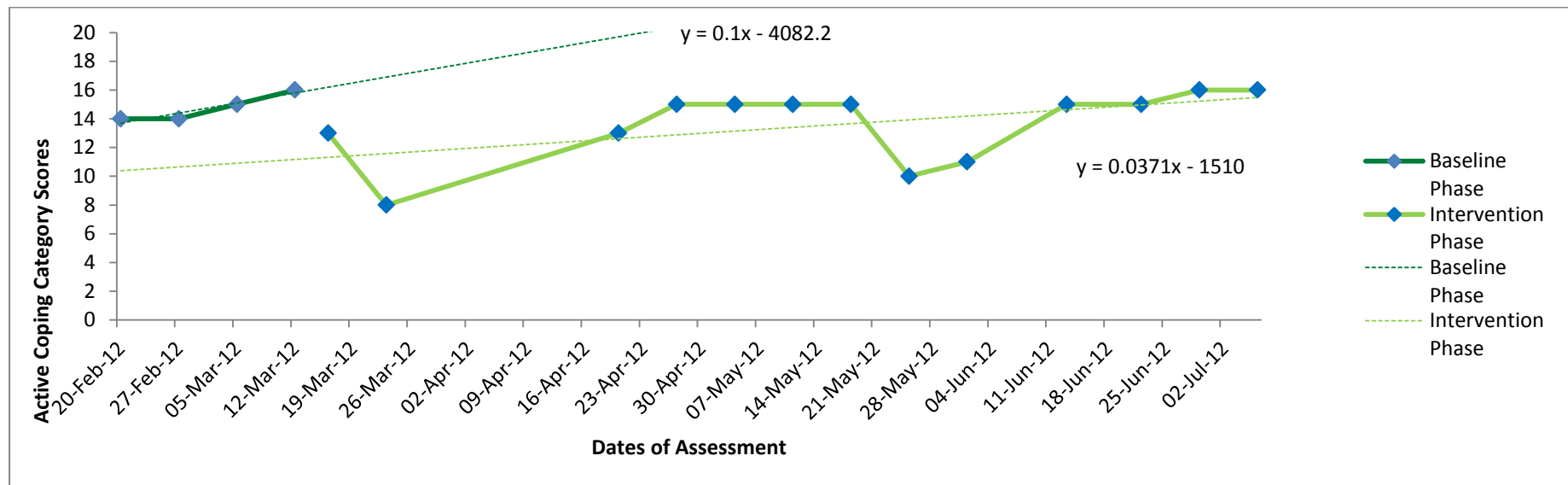


Figure 4-15 A graph showing Chand's selection of active coping skills on Kidcope before and during participation in FRIENDS

Mean	There was only a small difference in the phase means. The mean in the baseline phase was 14.75. The mean in the intervention phase was 13.61.	Change in phase mean	= 0.07
Level	There was a decrease in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 1.63
Slope	In the baseline there is a very gentle accelerating trend (0.1). During the intervention phase there is a smaller accelerating trend (0.04).	Magnitude of slope change	= 0.06
Overlap	Over half the data points in the intervention phase overlapped with the baseline phase. The remaining points were lower than baseline.	Percentage of data points overlapping	= 61.5%
Variability	The scores in the baseline phase were stable with a range of 2. In the intervention the range and instability were both greater.	Range of data (and Standard Deviation) In Baseline Phase	= 2 (0.96)
		Range of data (and Standard Deviation) In Intervention Phase	= 8 (2.5)

Table 4:16 Summary of Visual Analysis of Chand's active coping skills on Kidcope before and during participation in FRIENDS

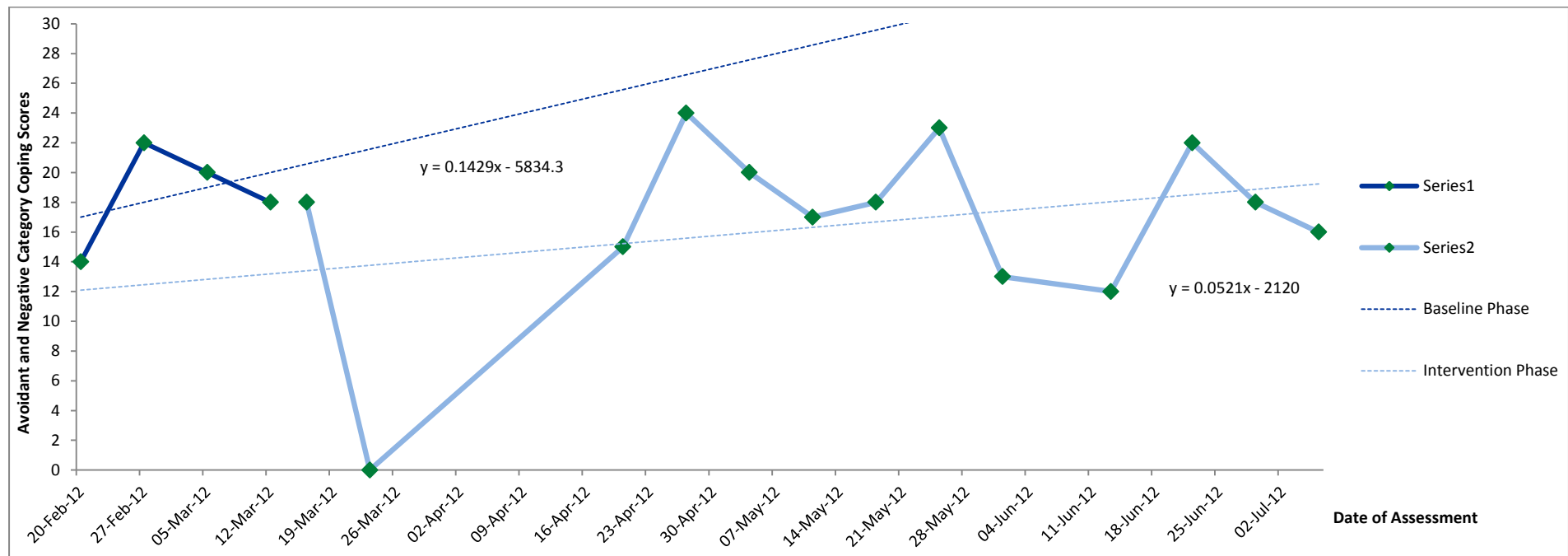


Figure 4-16 A Graph showing Chand's Selection of Avoidant and Negative Coping Skills during participation in FRIENDS

Mean	There was a small reduction in the phase means between baseline and intervention phases. The mean in the baseline phase was 18.5. The mean in the intervention phase was 16.61.	Change in phase mean	= -0.10
Level	There was no change in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 0
Slope	In the baseline there is a slight accelerating trend (-0.24). During the intervention phase there is a smaller accelerating trend (0.05).	Magnitude of slope change	= 0.09
Overlap	Over half of the data points in the intervention phase overlapped with the baseline phase.	Percentage of data points overlapping	= 61.5%
Variability	There was marked difference between phases. The both range and variability increased from the baseline to the intervention phase.	Range of data (and Standard Deviation) In Baseline Phase Range of data (and Standard Deviation) In Intervention Phase	= 8 (3.42) = 24 (6.16)

Table 4:17 Summary of Visual Analysis of Chand's avoidant and negative coping skills before and during participation in FRIENDS

4.4.3.1 Chand – Results Summary

4.4.3.1.1 Anxiety

Chand's initial total anxiety score indicated elevated anxiety. The SCAS results post intervention indicated a reduction in anxiety in the OCD subscale, maintenance in the general anxiety disorder subscale and an increase in the remaining subscales. Chand's pre-participation total SCAS score was 46 which indicated elevated anxiety (above 42). Post participation Chand's total SCAS increased to 56. The RCI was -0.69 which is less than the 1.96 required to say with 95% certainty that the change had not occurred by chance. The treatment outcome category is therefore *unchanged*.

4.4.3.1.2 Emotional Distress

The results of the PI ED suggest little change in the levels of emotional distress between the phase mean and the intervention phase. There was no change in level and only a small change in slope. With the high percentage overlap it is not at all convincing that a significant improvement has occurred although it is a possibility.

4.4.3.1.3 Active Coping Skills

Visual analysis revealed that the mean selection of active coping skills fell from the baseline phase to the intervention phase indicating deterioration rather than an improvement. The rate of trend acceleration also fell from baseline to intervention. It was decided that it was not at all convincing that there had been an improvement in the selection of active coping skills between baseline and intervention phases.

4.4.3.1.4 Negative and Avoidant Coping Skills

Visual analysis suggested there was a slight reduction in the phase mean and the accelerating trend reduced between the baseline and intervention phases. The majority of data points during the intervention phase overlapped with the baseline data points. It therefore seems not at all convincing that there had been a practical and significant improvement from the baseline to the intervention phase.

4.4.4 Participant 4: Dina

Dina is a 11 year old girl in year 7.

In school she is reported to struggle with her literacy and is performing at a low level 3 for reading and writing. Her progress is very slow and she has been identified as School Action on the code of practice. Her targets on her IEP are in the areas of extended writing and using basic punctuation.

Dina was selected for the FRIENDS intervention because she is very quiet and withdrawn and staff had concerns about her self-esteem. The learning mentors hoped that participation in FRIENDS would help Dina to increase her confidence and to contribute more in class.

Dina's attendance is 89.3% for the school year and she attended 8 of 9 FRIENDS sessions.

The learning mentors reported that they felt Dina was less shy and more outspoken since she began the FRIENDS programme (see Interview Appendix 18).

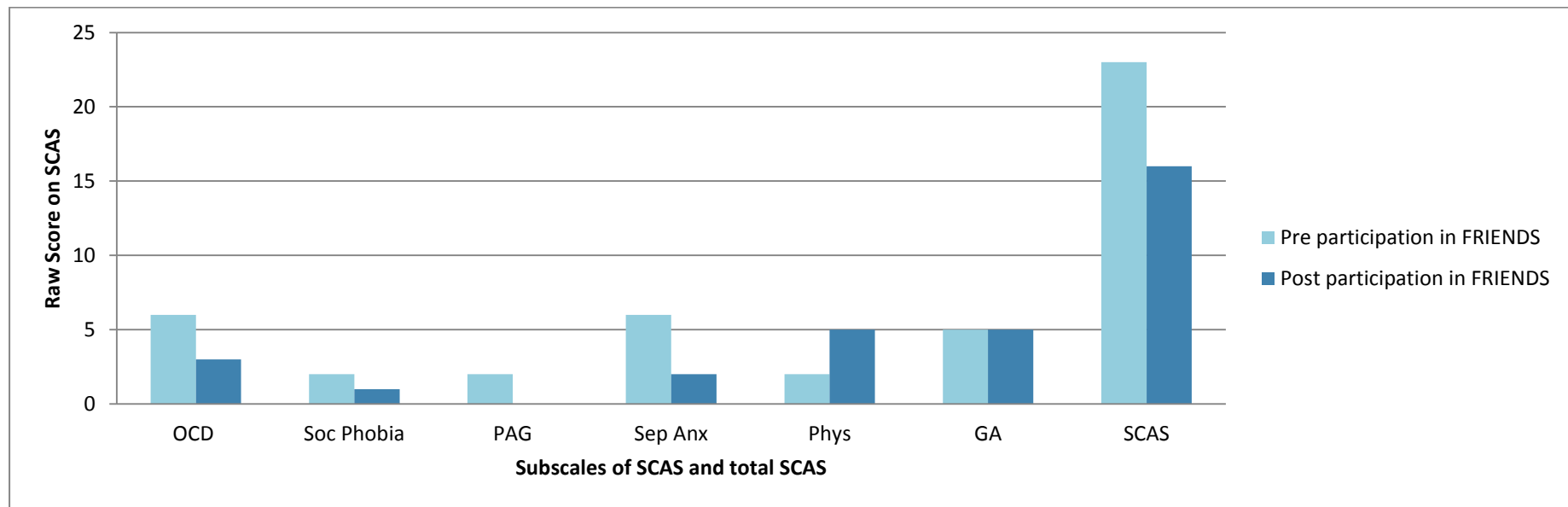


Figure 4-17 A bar graph showing Dina's SCAS results pre and post participation in FRIENDS

Pre-Participation total SCAS score	Post-Participation total SCAS score	Clinically Significant Improvement (Yes / No)	Relative Change Index (sig = >1.96)	Treatment Outcome category
23	16	No	0.45	unchanged

Table 4:18 A table showing Dina's treatment outcome analysis

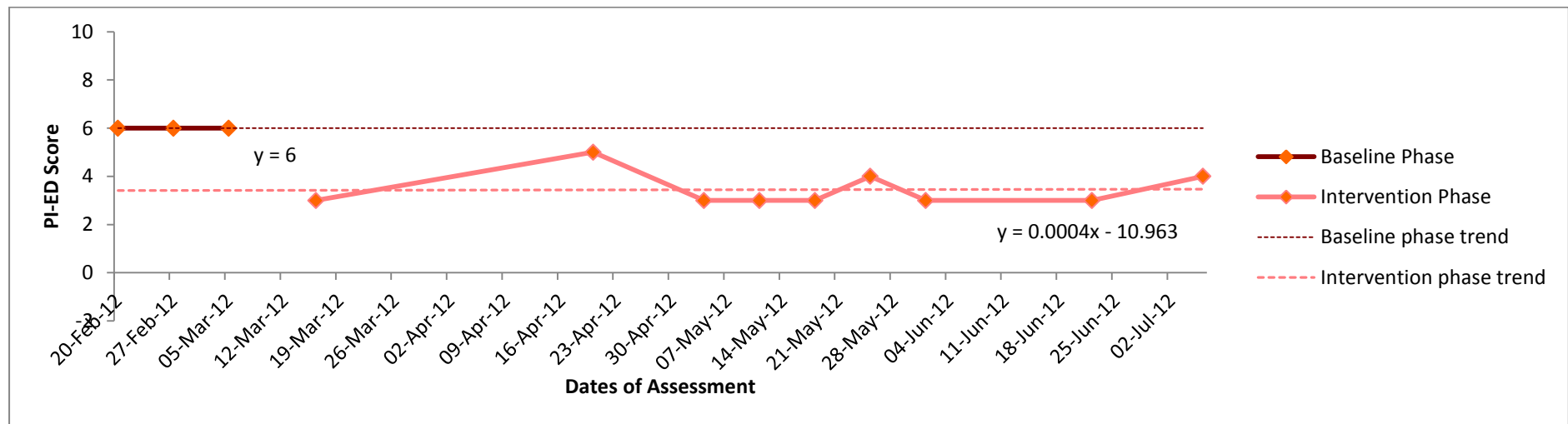


Figure 4-18 A graph showing Dina's PI-ED scores during baseline and intervention phases

Mean	The mean of the baseline was 6. This decreased during the intervention phase to 3.44.	Change in phase mean	= -0.42
Level	There was a decrease in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 2
Slope	The baseline phase had a level trend (0.00) .The intervention phase also had a level trend (0.00).	Magnitude of slope change	= 0
Overlap	None of the intervention data points overlapped with the baseline phase.	Percentage of data points overlapping	= 0%
Variability	The scores during baseline phase stable. The range for the intervention phase increased and the data became slightly more unstable.	Range of data (and Standard Deviation) In Baseline Phase	= 0 (0)
		Range of data (and Standard Deviation) In Intervention Phase	= 2 (0.72)

Table 4:19 Summary of Visual Analysis of Dina's PI-ED Scores

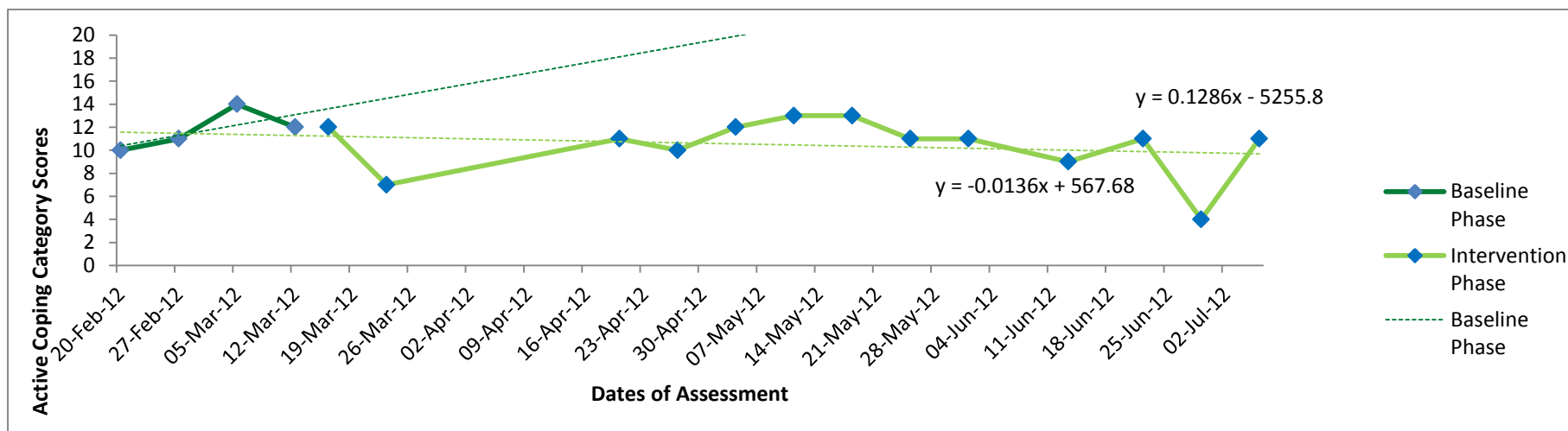


Figure 4-19 A graph showing Dina's selection of active coping skills on Kidcope before and during participation in FRIENDS

Mean	There was only a small difference in the phase means. The mean in the baseline phase was 11.75 .The mean in the intervention phase was 10.384.	Change in phase mean	= -0.13
Level	There was no change in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 0
Slope	In the baseline there is a very gentle accelerating trend (0.12). During the intervention phase there is a very small decelerating trend (0.01).	Magnitude of slope change	= 0.13
Overlap	The majority of data points in the intervention phase overlapped with the baseline phase.	Percentage of data points overlapping	= 76.9%
Variability	The range of scores increased slightly from baseline to intervention phase. The amount of variability also increased.	Range of data (and Standard Deviation) In Baseline Phase Range of data (and Standard Deviation) In Intervention Phase	= 4 (1.71) = 9 (2.5)

Table 4:20 Summary of Visual Analysis of Dina's active coping skills on Kidcope before and during participation in FRIENDS

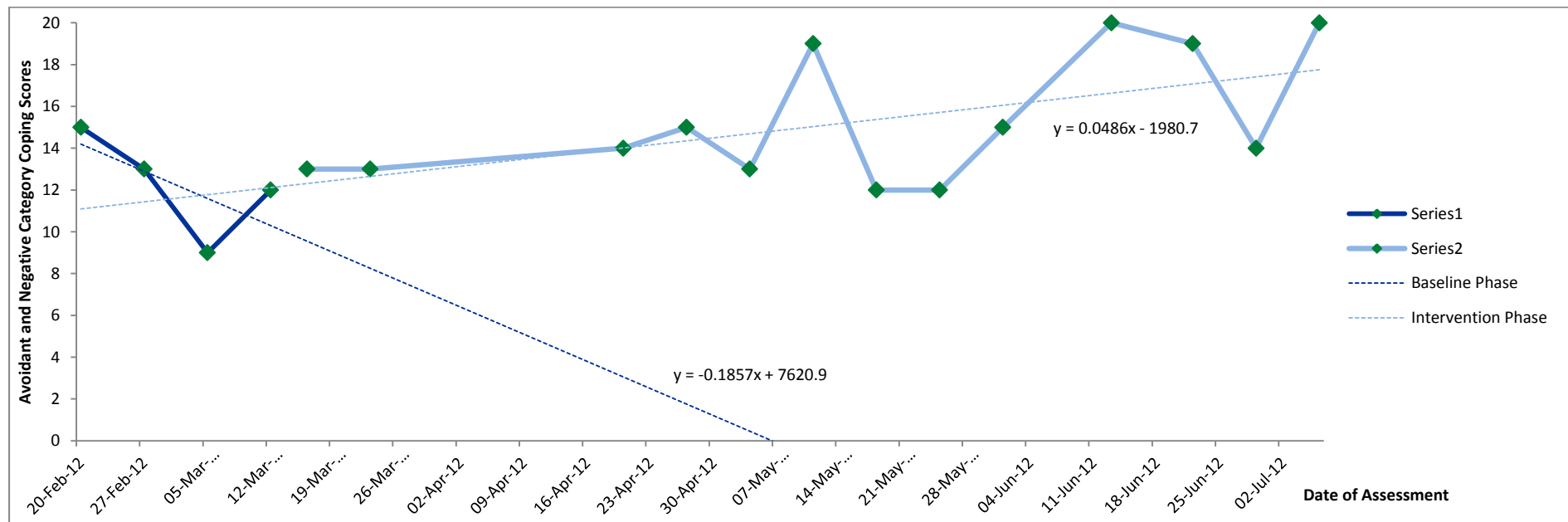


Figure 4-20 A graph showing Dina's selection of avoidant and negative coping skills during participation in FRIENDS

Mean	There was a small increase in the phase means between baseline and intervention phases. The mean in the baseline phase was 12.25. The mean in the intervention phase was 15.30.	Change in phase mean	= 0.25
Level	There was a small change in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 1.08
Slope	In the baseline there is a decelerating trend (-0.19). During the intervention phase slope is accelerating slightly (0.05).	Magnitude of slope change	= 0.24
Overlap	The majority of the data points in the intervention phase overlapped with the baseline phase.	Percentage of data points overlapping	= 69%
Variability	The range of the scores in the baseline phase increased in the intervention phase. The variability also increased from the baseline to the intervention phase.	Range of data (and Standard Deviation) In Baseline Phase	= 6 (2.5)
		Range of data (and Standard Deviation) In Intervention Phase	= 8(3.07)

Table 4:21 Summary of Visual Analysis of Dina's avoidant and negative coping skills before and during participation in FRIENDS

4.4.4.1 Dina – Results summary

4.4.4.1.1 Anxiety

Dina's anxiety was not elevated to clinical levels. The SCAS results indicated a reduction in anxiety across all subscales with the exception of Physical Injury Fear which increased and General Anxiety Disorder which was maintained. Dina's pre-participation total SCAS score was 23 and post intervention was 16. As the pre-intervention level was not elevated to clinical levels it was not possible to show a clinically significant improvement. The Reliable Change Index score of 0.45 is less than the 1.96 required to say with 95% certainty that the change had not occurred by chance. The treatment outcome category is therefore *unchanged*.

4.4.4.1.2 Emotional Distress

The results of the PI ED suggest a reduction in levels of emotional distress with a fall in the phase mean between the baseline and the intervention phase. The trend in both phases was zero and there was no overlap in data points between phases. The baseline was stable although it only contained 3 data points whilst the variability in the intervention phase was low. It was therefore possible to be reasonably certain that a practical and significant improvement has occurred.

4.4.4.1.3 Active Coping Skills

Visual analysis revealed a slight reduction in phase mean between baseline and intervention phase which suggests deterioration rather than improvement. A slight accelerating trend is maintained in the intervention phase but most data points overlapped with the baseline phase. It was decided that it was not at all convincing that there had been an improvement in the selection of active coping skills between baseline and intervention phases.

4.4.4.1.4 Negative and Avoidant Coping Skills

Visual analysis suggested an increase in the phase mean and an accelerating trend during the intervention phase suggesting increasing selection of negative and avoidant coping skills. It seems not at all convincing that there had been a

practical and significant improvement from the baseline to the intervention phase.

4.4.5 Participant 5: Erina

Erina is a 13 year old girl in year 8.

In school Erina is performing at expected levels and staff have no concerns about her cognitive skills. She has not been identified on the code of practice.

Erina was selected for the FRIENDS intervention because staff had concerns about her self-esteem. It is reported that she has periods of feeling sick and dizzy when she is in new situations and she seeks a lot of support from the learning mentors. School staff are aware of previous issues of self-harming. It is reported that Erina can be angry and outspoken in class at times. The learning mentors hoped that participation in FRIENDS would help Erina to cope better in stressful situations.

Erina's attendance is 98.2% for the school year and she attended 7 of 9 FRIENDS sessions.

The learning mentors reported that they felt Erina was seeking less support from them and appeared happier and more focused since she began the FRIENDS programme (see interview Appendix 18).

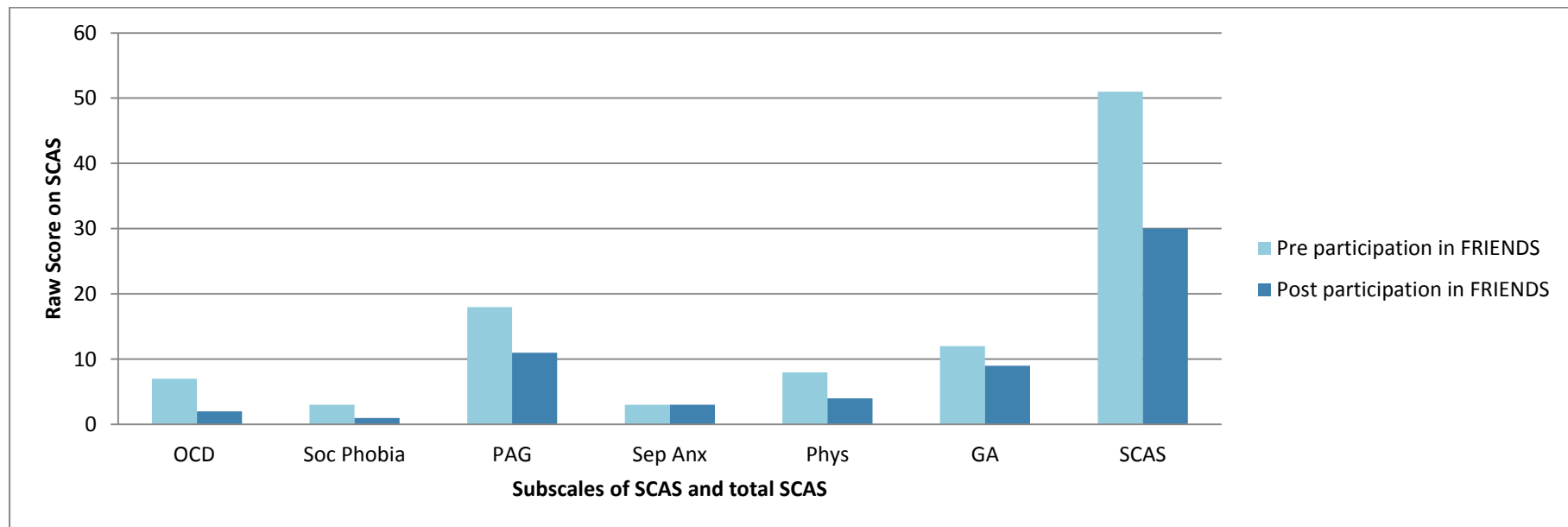


Figure 4-21 A bar graph showing Erina's SCAS results pre and post participation in FRIENDS

Pre-Participation total SCAS score	Post-Participation total SCAS score	Clinically Significant Improvement (Yes / No)	Relative Change Index (sig = >1.96)	Treatment Outcome category
51 (parent report 48)	30	Yes	1.37	unchanged

Table 4:22 A table showing Erina's treatment outcome analysis

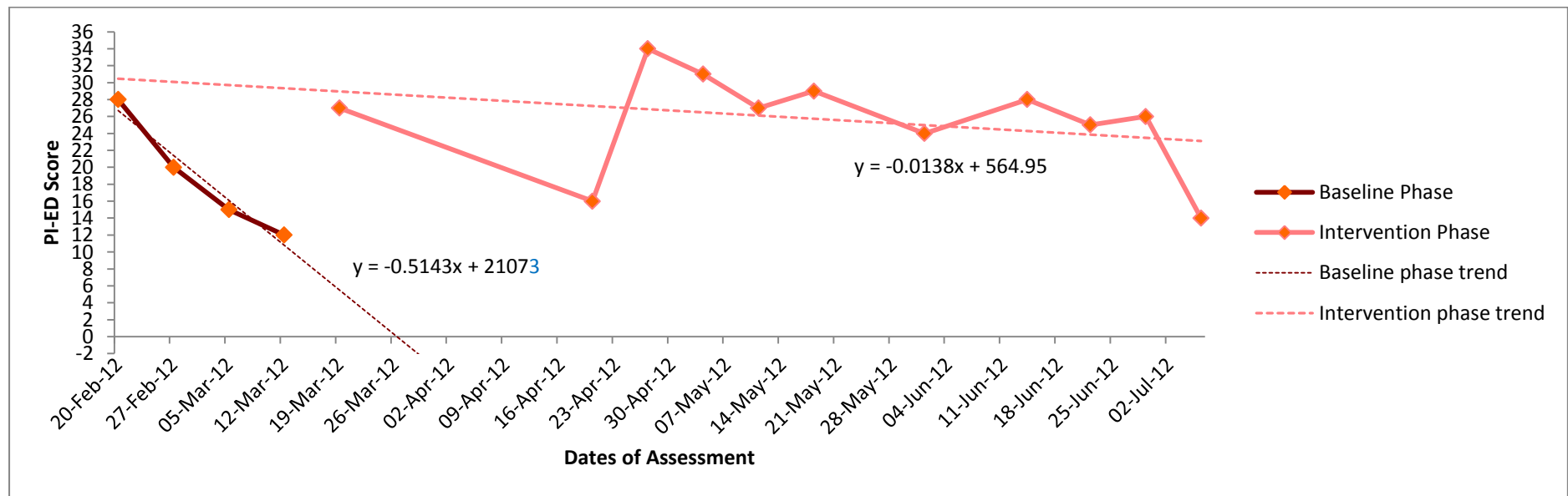


Figure 4-22 A graph showing Erina's PI-ED scores during baseline and intervention phase

Mean	The mean of the baseline was 18.75 increasing to 25.55 during the intervention.	Change in phase mean	= 0.36
Level	There was a big increase in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 2.25
Slope	The baseline phase had a decreasing trend (-0.51) this was more gradual decline during the Intervention Phase (-0.01)	Magnitude of slope change	= -0.5
Overlap	The majority of the intervention data points overlap with the baseline phase.	Percentage of data points overlapping	= 72.7%
Variability	The range of scores increased from baseline to intervention phase. There was a large amount of fluctuation in the baseline phase and the data is marginally more stable during the intervention phase.	Range of data (and Standard Deviation) In Baseline Phase Range of data (and Standard Deviation) In Intervention Phase	= 16 (6.99) = 20 (5.92)

Table 4:23 Summary of the Visual Analysis of Erina's PI-ED Scores

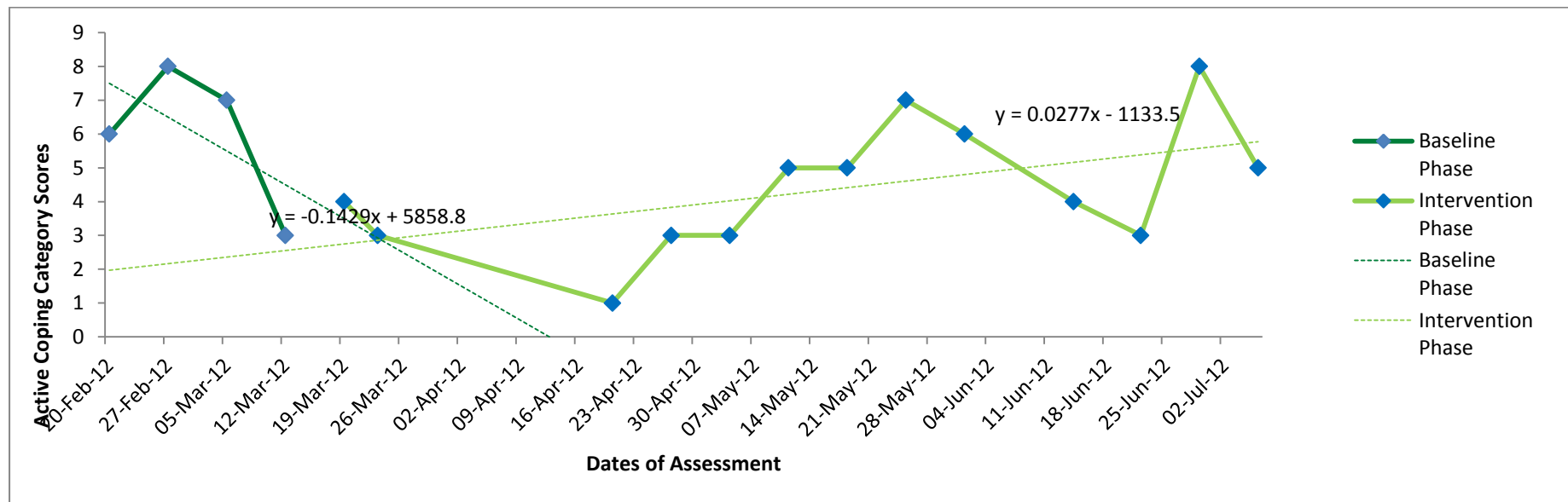


Figure 4-23 A graph showing Erina’s selection of active coping skills on Kidcope before and during participation in FRIENDS

Mean	There was a small difference in the phase means. The mean in the baseline phase was 6 .The mean in the intervention phase was 4.38.	Change in phase mean	= -0.27
Level	There was small increase in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 1.3
Slope	In the baseline there is a gentle decelerating trend (-0.14). During the intervention phase there is a very small accelerating trend (0.02).	Magnitude of slope change	= 0.16
Overlap	Most of the data points in the intervention phase overlapped with the baseline phase.	Percentage of data points overlapping	= 92.3%
Variability	The range of scores increased between baseline and intervention phase but the intervention phase was slightly more stable.	Range of data (and Standard Deviation) In Baseline Phase	= 5 (2.16)
		Range of data (and Standard Deviation) In Intervention Phase	= 8 (1.89)

Table 4:24 Summary of Visual Analysis of Erina’s active coping skills on Kidcope before and during participation in FRIENDS

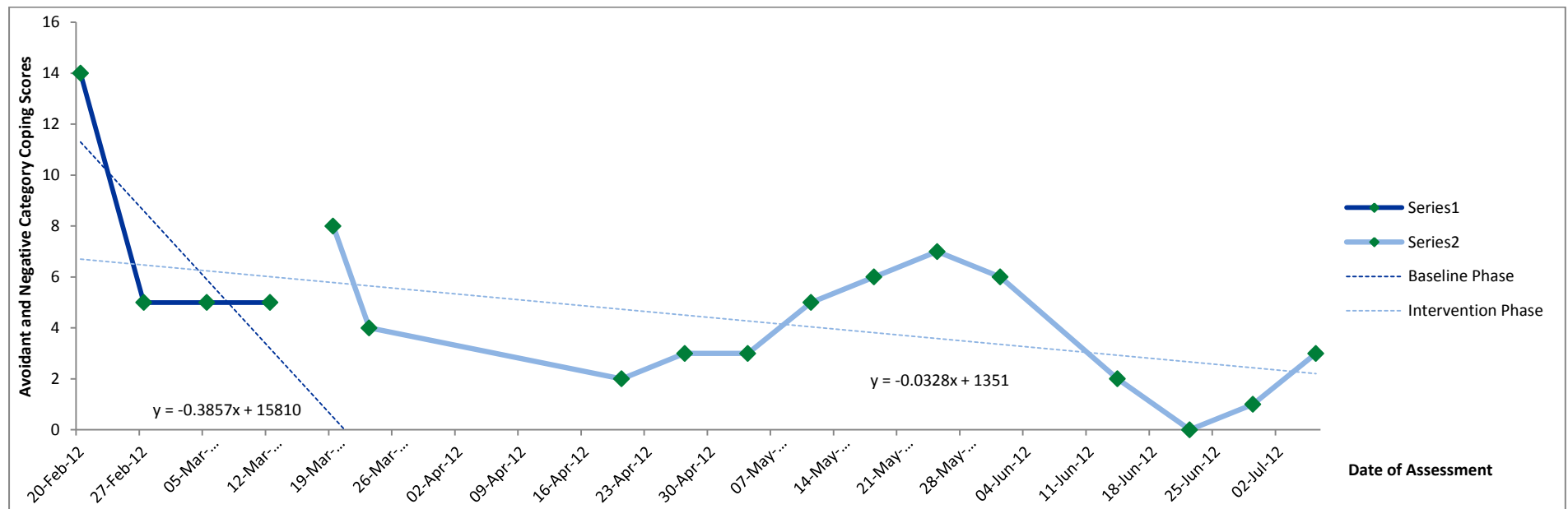


Figure 4-24 A graph showing Erina's selection of avoidant and negative coping skills before and during participation in FRIENDS

Mean	There was a small reduction in the phase means between baseline and intervention phases. The mean in the baseline phase was 7.25. The mean in the intervention phase was 4.46.	Change in phase mean	= -0.38
Level	There was an increase in level between the end of the baseline and the beginning of the intervention phase.	Absolute change in level	= 1.8
Slope	In the baseline there is a decelerating trend (-0.38). During the intervention phase the slope decelerates more slowly (-0.03).	Magnitude of slope change	= 0.35
Overlap	Around half of the data points in the intervention phase overlapped with the baseline phase.	Percentage of data points overlapping	= 54.5%
Variability	There were a similar range of scores in the baseline phase and intervention phases. The variability decreased from the baseline to the intervention phase.	Range of data (and Standard Deviation) In Baseline Phase	= 9 (4.5)
		Range of data (and Standard Deviation) In Intervention Phase	= 9 (2.63)

Table 4:25 Summary of Visual Analysis of Erina's avoidant and negative coping skills before and during participation in FRIENDS

4.4.5.1 Erina – Results Summary

4.4.5.1.1 Anxiety

The SCAS results indicated a reduction in anxiety across all subscales. Erina's pre-participation total SCAS score was 51 which indicates elevated anxiety. The parent report form indicated similarly high levels with a score of 48. Post-intervention Erina's total SCAS fell to 30. Her score was elevated to a clinical level and did reduce to a normal level after participation in FRIENDS. However the Reliable Change Index score of 1.37 is less than the 1.96 required to say with 95% certainty that the change had not occurred by chance. The treatment outcome category is therefore *unchanged*.

4.4.5.1.2 Emotional Distress

The results of the PI ED suggest an increase in levels of emotional distress with an increase in the phase mean between the baseline and the intervention phase although both phases had a decreasing trend. Variability was similar in each phase and there was a large overlap in the data points in each phase. It was therefore not at all convincing that that a practical and significant improvement had occurred.

4.4.5.1.3 Active Coping Skills

Visual analysis revealed a slight reduction in the phase mean between the baseline and intervention phases which suggests deterioration rather than improvement. A slight accelerating trend in the intervention phase replaces the decelerating trend in the baseline which could indicate an improvement in the selection of active coping skills. However, almost all of the data points in the intervention phase overlapped with the baseline phase although this is expected if there is a reversal of trend. It was decided that it was uncertain that there had been an improvement in the selection of active coping skills between baseline and intervention phases.

4.4.5.1.4 Negative and Avoidant Coping Skills

Visual analysis showed a decrease in the phase mean between baseline and intervention phases. The baseline decelerating trend continues at a reduced rate in the intervention phase and nearly half of the data points in the

intervention phase are lower than in the baseline phase. It is possible that there had been a practical and significant improvement from the baseline to the intervention phase.

4.4.6 Summary of Research Questions 2 and 3

Table 4:26 contains a summary of the results for each participant.

The SCAS results, analysed using clinical significance and the reliable change index showed no significant improvement for any of the participants.

Visual analysis of the SCED data suggested that participation in FRIENDS resulted in no improvement in emotional distress for any of the participants post intervention although it is *reasonably certain* that 1 participant showed an improvement in her PI-ED scores during the intervention and *possible* that there was improvement for another participant.

In addition it appeared *uncertain* or *not at all convincing* that an improvement in the selection of active coping strategies had occurred in any of the participants during the intervention although it is *possible* that 2 of the participants showed a reduction in their selection of avoidant and negative coping strategies.

These findings, and their relationship to the findings for question 1, will be considered in more detail in the discussion chapter.

Name <i>Measure</i>	Aaron	Benjamin	Chand	Dina	Erina
SCAS	<i>unchanged</i>	<i>unchanged</i>	<i>unchanged</i>	<i>unchanged</i>	<i>unchanged</i>
PI-ED Practical and significant improvement?	<i>possible</i>	<i>not at all convincing</i>	<i>not at all convincing</i>	<i>reasonably certain</i>	<i>not at all convincing</i>
KIDCOPE – ACTIVE Practical and significant improvement?	<i>not at all convincing</i>	<i>uncertain</i>	<i>not at all convincing</i>	<i>not at all convincing</i>	<i>uncertain</i>
KIDCOPE AVOIDANT / NEGATIVE Practical and significant improvement?	<i>uncertain</i>	<i>possible</i>	<i>not at all convincing</i>	<i>not at all convincing</i>	<i>possible</i>

Table 4:26 A summary of changes in anxiety, emotional distress and coping strategies identified for each participant

Discussion

5 DISCUSSION

This chapter will outline the findings, and discuss the implications, for each research question and hypothesis. A section discussing these results in relation to previous research will be followed by evaluation of the methodology of the study. The implications of the research for professional practice and further research will then be highlighted. A concluding section will summarise the findings and the original contribution of this study.

5.1 Research question 1

How was FRIENDS implemented in a mainstream secondary school participating in a local authority TAMHS project?

FRIENDS was implemented by two learning mentors trained as facilitators as part of a TAMHS programme. Two aspects of implementation are considered here;

- How was the programme implemented?
- How did features of the context impact upon the delivery of the programme?

5.1.1 Summary of findings

5.1.1.1 *How was the programme implemented?*

Adherence: A number of programme components were well adhered to. These included relaxation techniques, encouraging participants to recognise positive features in their lives, and learning about emotions and coping methods. Just under 60% of the tasks in the Manual were completed. However, there appeared to be insufficient opportunity for participants to apply and practise the skills they had learned.

Exposure: 10 sessions were planned but these were of approximately one hour duration instead of one and a half hours and there were no booster or parent sessions. One session was not delivered. This meant that the

participants received around two thirds of the training time specified in the programme. The number of sessions attended by the participants varied from 7 to 9 sessions.

Quality of delivery: The learning mentors appeared enthusiastic and motivated to deliver the programme. They stated that they felt well trained but also mentioned that they were not confident that they were selecting the correct parts of the programme to deliver.

Participant responsiveness: The learning mentors reported that the participants enjoyed the programme although it should be noted that the learning mentors avoided aspects of the programme which may challenge the participants.

Programme adaptation: The programme was adapted, and some aspects omitted, by the learning mentors to fit into the time available.

Overall it appeared that FRIENDS as delivered in the school varied from the programme as designed.

5.1.1.2 How did the features of the context impact upon the delivery of the programme?

A number of features of the context appear to have impacted upon the implementation of FRIENDS. These include:

- insufficient time available to deliver the programme in its entirety;
- delivery of the programme to too small, and too homogenous, a group;
- inconsistent delivery due to the learning mentors' delivery time not being prioritised and protected;
- lack of involvement by parents; and
- the level of training, expertise and experience of the learning mentors in terms of;
 - identifying which are the key features of the programme during adaptation,

- providing challenge for the participants and scaffolding their progress to enable them to receive positive feedback from their use of coping strategies, and
- maintaining sufficient classroom pace to complete objectives.

5.1.2 Conclusion

The FRIENDS programme delivered within this school differed from that described in the Manual, reflecting a number of factors in the context including constraints of expertise, time and space within the setting.

5.2 Research Question 2

Does FRIENDS, as implemented in a mainstream secondary school participating in a local authority TAMHS project, reduce anxiety and emotional distress in secondary aged children identified by school staff as being anxious?

This question was addressed by considering the results of the SCAS (Spence, 1999, p. 56) pre and post intervention and by the results of the PI ED (O'Connor et al., 2010b) used during the single case research design section.

5.2.1 Hypotheses

- The participants will experience lower levels of anxiety, as measured by the Spence Children's Anxiety Scale (SCAS) (Spence, 1999), post intervention compared to pre intervention;
- The weekly reported level of emotional distress, as measured by the Paediatric Index of Emotional Distress (PI ED),(O'Connor et al., 2010b) see section 3.4.4.3, will decrease between the baseline and the intervention phase;

5.2.2 Null Hypotheses

- The participants will experience no change in their levels of anxiety, as measured by the Spence Children's Anxiety Scale (SCAS) (Spence, 1999), post intervention compared to pre intervention.

- The weekly reported level of emotional distress as measured by the Paediatric Index of Emotional Distress (PI ED),(O'Connor et al., 2010b) see section 3.4.4.3, will not decrease between the baseline and the intervention phases

5.2.3 Summary of findings

The SCAS results indicated no significant clinical reduction in anxiety pre and post the intervention for any of the participants.

Visual analysis of the weekly PI-ED scores suggested that it was *reasonably certain* that one participant (Dina) showed a practical and significant improvement in her anxiety levels between phases and *possible* that another participant (Aaron) showed a practical and significant improvement. For the remaining participants it was *not at all convincing* that a practical and significant improvement had occurred.

5.2.4 Conclusion

For the pre and post anxiety measure the null hypothesis must be accepted in all cases. Participation in the FRIENDS programme, in this context, did not result in reduced anxiety.

For the weekly anxiety measure it can be concluded that participation in the FRIENDS programme *may* have resulted in a reduction in emotional distress for two participants. For the other participants it appears that participation in the FRIENDS programme did not reduce their emotional distress and the null hypothesis must be accepted.

5.2.5 Possible Explanations for these findings

There are a number of possible reasons why the participants did not show a consistent convincing reduction in their level of emotional distress:

- 1) Participation in FRIENDS may not reduce emotional distress.
- 2) FRIENDS as implemented may not reduce emotional distress.

- 3) The characteristics and circumstances of the participants influenced the reduction of their emotional distress in response to the FRIENDS programme.
- 4) The measures had insufficient construct validity and/or reliability to ascertain changes in emotional distress.

Reasons 1-3 will be discussed in section 5.4; reason 4 will be discussed in section 5.5.

5.3 Research question 3

Does FRIENDS, as implemented in a mainstream secondary school participating in a local authority TAMHS project, change the coping skills of secondary aged children identified by school staff as being anxious?

This question was addressed by considering the results of the Kidcope (Spirito et al., 1998) used during the SCED Section.

5.3.1 Hypotheses

The hypotheses for the SCED aspect of the research are:

- The selection of active coping strategies, as measured by a modified version of Kidcope, see section 3.4.4.4, (Spirito et al., 1998) will increase, between the baseline and the intervention phases;
- The selection of negative and avoidant coping strategies, as measured by a modified version of Kidcope, see section 3.4.4.4, (Spirito et al., 1998) will decrease between the baseline and the intervention phases.

5.3.2 Null Hypotheses

- The selection of active coping strategies as measured by a modified version of Kidcope, see section 3.4.4.4, (Spirito et al., 1998) will not increase between the baseline and the intervention phase has occurred.
- The selection of negative and avoidant coping strategies as measured by a modified version of Kidcope, see section 3.4.4.4, (Spirito et al., 1998) will not decrease between the baseline and the intervention phase has occurred.

5.3.3 Summary of Findings

Visual analysis of the weekly Kidcope scores suggested that it was *uncertain* that two participants (Benjamin and Erina) showed a practical and significant improvement in their active coping skills between phases and *possible* that the same participants showed a practical and significant improvement (i.e. reduction) in their selection of negative and avoidant coping skills. For two participants (Chand and Dina) it was *not at all convincing* that a practical and significant improvement had occurred in their selection of either active or negative / avoidant coping skills. For one participant (Aaron) it was *not at all convincing* that a practical and significant improvement had occurred in his selection of active coping skills and *uncertain* that there had been improvement in his selection of avoidant and negative coping skills.

5.3.4 Conclusions

With regard to selection of active coping skills the null hypothesis must be accepted for all cases and suggests that participation in FRIENDS, in this context, had no impact on the choice of coping skills.

With regard to avoidant and negative coping skills, for two participants it is tentatively suggested that the null hypothesis can be rejected and the hypothesis that participation in FRIENDS *may* reduce the selection of negative and avoidant coping strategies for these participants in this context can be accepted.

For the remaining participants the null hypothesis must be accepted, suggesting that participation in FRIENDS had no impact on the choice of coping skills for these participants in this context.

5.3.5 Possible Explanations for these findings

There are a number of possible reasons why the participants did not show a consistent convincing improvement in their selection of coping skills:

- 1) FRIENDS does not improve coping skills.
- 2) FRIENDS as implemented did not improve coping skills.

- 3) Characteristics of the participants reduced the change in coping skill selection.
- 4) The measures had insufficient construct validity and/or reliability to ascertain the change in coping skill selection.

Reasons 1-3 will be discussed in section 5.4; reason 4 will be discussed in section 5.5.

5.4 Discussion of findings and links to previous research

The results of this research suggest that the FRIENDS programme was implemented with lower levels of integrity than was hoped for and additionally that the improvement of the anxiety levels and coping strategy selection of the participants was less than previous research indicated was possible. Whilst this study cannot show a causal relationship between these factors it may be hypothesised that the level of programme integrity achieved contributed to the impact of the programme.

This discussion section will consider the findings in relation existing research. The section will begin by considering how FRIENDS was delivered in school and the factors influencing this before considering the response of the participants to the programme.

5.4.1 The implementation of FRIENDS in a school setting by staff trained through TAMHS

5.4.1.1 Adaptations to the programme

The findings suggest that there were limitations in the delivery of FRIENDS. In particular it was apparent that both exposure and adherence to the programme were less than ideal with around 60% of the activities suggested in the manual delivered. This statistic fails to reveal the relative importance of the activities included and omitted and also the quality of the delivery of the included activities. More information regarding the quality of delivery could have been ascertained by observation of the FRIENDS sessions.

The adaptation of programmes is a contentious issue (Dane & Schneider, 1998). Some researchers argue that programmes should be implemented fully (Elliott & Mihalic, 2004). An alternative view, however, is that adaptation to the context of delivery is necessary for the success of the programme (Blakely, Mayer, Gottschalk, Schmitt, Davidson, Roitman, & Emshoff, 1987). Dane and Schneider (1998) describe a compromise perspective in which modifications are acceptable provided that critical features of the programme are delivered. However, Elliott and Mihalic (2004) argue that;

The call for a negotiated balance in fidelity/adaptation has the potential for lowering this standard, encouraging and empowering local implementers to

make questionable adaptations, and undermining the research community's commitment to fidelity (p 52).

Han and Weiss (2005) also acknowledged that school staff require sufficient understanding of the programme to modify it without losing the core principles.

In the current research the learning mentors highlighted that they lacked confidence in their ability to modify the programme. Their perception appears to be supported by the variation in the delivered programme to the manualised programme and it may be hypothesised that not all of the core principles of the programme have been retained. Consideration of the delivered programme with a colleague allowed the identification of particular aspects of the programme which may have been neglected during adaptation of the programme. In particular, it has been noted that participants had less time to apply and practise techniques and skills, such as changing negative thoughts into positive thoughts, using coping step plans, and applying problem solving plans, than was suggested in the FRIENDS Manual.

The impact of limited practice may be viewed in relation to Instructional Hierarchy, a framework describing the five stages of instruction and learning (Haring and Eaton 1978 cited by Miller (2008)) (See table 5:1).

Acquisition	Learners become able to perform a skill accurately for the first time
Fluency	The learner becomes able to perform the new skills fluently as well as accurately
Maintenance	Accuracy and fluency are maintained even in the absence of periods of direct teaching of the skill
Generalization	Learners become able to apply the skills across different contexts
Adaptation	Learners are able to make novel adaptations to the skill in order to solve new problems

Table 5:1 Haring and Eaton's Instructional Hierarchy (Miller 2008)

This framework suggests that in order for FRIENDS to impact upon the anxiety levels of the participants they will need to generalise and adapt the skills learned during participation in FRIENDS to situations outside of the programme delivery. Ardoin and Daly (2007) suggest that for this to occur participants need to develop fluency by

frequent and repeated opportunities to respond to the situation. In the current research, opportunities for acquisition of new knowledge and skills were more apparent than opportunities to develop fluency. This may have resulted in participants failing to reach the levels of generalisation and adaptation necessary to measure reduced anxiety and improved coping skills.

Another purpose of practising problem and coping step plans reflects learning theories of operant conditioning which suggest that behaviour is likely to be repeated if it is positively reinforced (Skinner, 1958). By encouraging participants to experiment with their skills, and have them positively reinforced when they are successful, their motivation for repeated use of the skills may increase (Barrett, 2010a). In the current research there was a lack of opportunity to practise and receive positive reinforcement. This may have contributed to the reduced impact on anxiety and coping skills of FRIENDS in this evaluation compared to previous research findings.

5.4.1.2 Delivery by Learning Mentors not teachers

One of the identified rules of the activity system delivering FRIENDS was that the intervention was delivered by learning mentors. The skills of the learning mentors are tools specific to this research context.

Their acknowledged lack of confidence in adapting the programme, together with the hypothesis that some aspects necessary for the acquisition of new skills may have been omitted, raises broader questions around who should be facilitating programme delivery in schools.

Briesch et al. (2010) calculated that effect sizes were lower when the intervention was implemented by teachers or school staff (ES $d=0.22$) than when implemented by researchers (ES $d=0.56$). It is likely that in general there may be differences in skills between qualified teachers and learning support staff which may impact upon the implementation of the intervention. It can be hypothesised that teachers may have more knowledge of learning theories than learning mentors which would support their understanding of which aspects of the programme need to be included in modifications. Webster, Blatchford, Bassett, Brown, Martin, and Russell (2011) argue that if "TAs [teaching assistants] are to have a pedagogical role, ... it should be limited

to delivering structured and well-planned interventions for which they must be properly trained and prepared” (p.15). This would suggest that the learning mentors, although able to deliver the intervention, should not have responsibility for planning the intervention.

The skills of the learning mentors in delivering the programme sessions may also be different to the skills of teachers. Observational research by Rubie-Davies, Blatchford, Webster, Koutsoubou, and Bassett (2010) suggested that teachers are more likely than teaching assistants to show aspects of effective teaching in their interactions with pupils by requiring pupils to reason and engage, linking pupils’ learning to prior knowledge and giving pupils feedback on their learning. Teaching assistants were reported to be more concerned with task completion. It would have been useful to gather observational evidence of the quality of programme delivery by the learning mentors.

The interview in this study with the learning mentors suggested that at times the learning mentors found it difficult to maintain pace in the lesson and that they were focused upon choosing activities the group would enjoy rather than those linked to the learning objectives. One aspect of this may be the relationship between the learning mentors and the participants, which appeared to the researcher to be very maternal and nurturing. Although this can be viewed as a supportive relationship, it may have resulted in a reluctance to challenge pupils with more difficult tasks. Adults with a different relationship to the participants may have achieved different responses.

It is not clear that teachers would achieve greater programme fidelity than teaching assistants or learning mentors but previous research has indicated that teachers are less effective than psychologists and researchers (Briesch et al., 2010). This may reflect teachers’ lack of knowledge of the CBT principles which underpin the programme or the competing demands teachers experience in the classroom. It appears possible that the advantages in increasing programme reach, by allowing educationalists to deliver the programme, may be offset by reduced programme impact.

Further research is needed to clarify such skill differences between teachers, teaching assistants and psychologists. Additional training in the learning theories relevant to teaching the programme and provision of support for school staff in modifying the programme may contribute towards improving programme implementation in the research context and, if found to be necessary, in other schools. Alternatively, the appropriateness of allowing learning mentors rather than teachers or even EPs to modify and / or deliver the programme needs to be considered.

5.4.1.3 The need for programme modification

Some of the issues described above may not have occurred if the Manual could have been implemented with greater integrity. In the current case study a number of issues were identified which resulted in modification of FRIENDS. Some of the modifications were required from the outset, for example, planning for the needs of the individual and for a reduced time allocation. Other modifications were unexpected and reflected the particular context e.g. unexpected reduction in delivery time, participant and group characteristics, expertise of the teaching staff, prioritising of roles and lack of parental involvement.

One aspect of unintentional modification was the lack of involvement of parents in the programme. The Manual suggests that there are two parent sessions which are run alongside the school sessions. Previous research has found that parental behaviour can reinforce avoidant coping strategies which may be contributing towards anxiety disorders (Barrett, Rapee, Dadds, & Ryan, 1996; Shortt, Barrett, & Fox, 2001). By including parent sessions it may be possible to reinforce appropriate coping strategies outside of the FRIENDS sessions and increase the opportunities for generalisation of skills. Dadds and Barrett (2001) concluded that the involvement of family appears to support treatment for anxiety disorders. Reasons for the lack of parental involvement may be hypothesised. Firstly, it does not appear that the learning mentors attempted to organise parent sessions. They did not believe parents wished to be involved, although these conclusions were based upon the accounts of the participants regarding the support they got with their FRIENDS homework activities rather than views expressed by parents. Secondly, English was an additional language for many of

the parents. This made home / school communication difficult. It can be hypothesised that parental involvement may have supported the development of skills achieved by the participants and consequently their coping skills and levels of anxiety.

The identification of intentional and unexpected modifications to the programme is consistent with previous research. Elliott and Mihalic (2004) report that most sites are initially unprepared to implement and maintain programmes with fidelity. Issues of training quality, staff skills, staff self-efficacy, staff turnover, continued technical support, beliefs about the programme, commitment of staff and resources, local adaptations, consistency of implementation, space for implementation, and time for implementation have all been identified as factors influencing the implementation of evidence based research (Elias, Zins, Graczyk, & Weissberg, 2003; Elliott & Mihalic, 2004; Han & Weiss, 2005; Henderson, MacKay, & Peterson-Badali, 2006; Kam, Greenberg, & Walls, 2003; Rohrbach, Grana, Sussman, & Valente, 2006; Thaker, Steckler, Sánchez, Khatapoush, Rose, & Hallfors, 2008).

A few regional TAMHS projects which have evaluated FRIENDS as part of their TAMHS evaluations have reported similar findings to this study. For example, North Somerset TAMHS Programme attributed the lack of statistically significant reduction in anxiety, pre and post participation in FRIENDS, to implementation difficulties and a lack of staff time and resources (Pye, Kleve, & Hooper, 2011). Essex TAMHS project, whilst reporting benefits of participation as perceived by staff and parents, also listed the following difficulties of implementation:

- The checklist did not prove an adequate tool for good appropriate selection for the first tranche of pupils. This was compounded by the very short timescale to brief schools on the selection process and for schools to undertake a thorough, staged selection process.
- Fitting a 10 week programme into a 14 week school term on a consistent basis, taking into account all the special events in schools' calendars which mean that the children are not available

- Dealing with children's absences within a hierarchical / consequential programme.
- Ensuring the consistent availability of a suitable space for the programme
- Session length. 60 minute sessions were agreed as these fitted schools timetables the best rather than the 90 minute sessions apparently used in the 'classic' delivery model. In practice this often meant 50 minute actual delivery sessions (Essex TaMHS project, 2011, pp. 3-4)

The current research appears to add further weight to the growing body of evidence highlighting implementation issues in relation to FRIENDS when delivered through the TAMHS project. This raises questions regarding the ability of FRIENDS to be effectively disseminated via the TAMHS initiative and what additional support would be useful to prepare schools to implement and maintain programmes with fidelity.

5.4.1.4 Increasing the capability of organizations to implement programmes

There is little research into methods of increasing the capability of organizations to implement programmes (Rohrbach et al., 2006). Two areas which have been researched are the impact of the involvement of senior staff and continuing support for implementers after training.

The involvement in, and endorsement of, programmes by senior school staff has been found to be particularly important (Forman, Olin, Hoagwood, Crowe, & Saka, 2009; Kam et al., 2003). It is possible that some of the practical implementation difficulties identified within the current study would not have occurred if the senior management team were *actively* engaged with the planning, training and implementation of FRIENDS although further research would be needed to establish this. For example, it may have been possible to increase the time available to deliver the programme, protect learning mentor time and prioritise room allocation, i.e., alter some of the rules of the activity system, with greater involvement of the senior management team. In addition, greater emphasis on the programme within school may also encourage participation by parents and increase generalisation opportunities around school.

Consultant feedback on the delivery of a programme is another feature identified by previous research as supporting programme implementation (Han & Weiss, 2005). This is supported by research by (Kelly, Somlai, DiFranceisco, Otto-Salaj, McAuliffe, Hackl, Heckman, Holtgrave, & Rompa, 2000) who found that programme fidelity was greater in settings which received a manual, training and support compared to those who received a manual and training or just a manual, although the quasi-experimental design means this may reflect group differences. Continued support is absent from the current TAMHS project. Follow up support consisted of one drop-in session in the summer term, unless schools had purchased the Educational Psychology Service *and* chose to use the time they had purchased seeking support.

The findings of the current research may indicate that planning for additional support for schools may be beneficial in improving implementation and crucial if any hoped for outcomes are to be seen. Research completed by a previous doctoral student on the same course as the author identified the need for supporting TA self-efficacy by including iterative training and practise opportunities as well as providing confirmation and reassurance and developing whole school support (Higgins, 2009). It would be useful to conduct research into the impact of developing such strategies and increasing levels of individual school support and feedback on outcomes and programme implementation. An action research approach may be a useful method of evaluating such changes within the current research context.

It appears that this implementation of FRIENDS in a school setting by staff trained through the TAMHS project is consistent with other implementations of similar interventions in real world settings. The next section will consider the impact of the intervention in the light of these findings.

5.4.2 The impact of participation in FRIENDS on levels of emotional distress

Pre and post intervention measurements of anxiety were taken using the SCAS. As it was inappropriate to use group means, due to the number of participants, measures of clinical significance and reliable change (RCI) were used to calculate the significance of the difference pre and post intervention. All participants were categorised as *unchanged*. This finding suggests that FRIENDS, in this research context, had no impact.

This finding appears contradictory to previous positive evaluations of FRIENDS. In 9 of the 15 studies included in the systematic literature review there was a significant reduction in anxiety pre and post intervention, although sometimes there was no difference between the control and intervention group post intervention (Lowry-Webster et al., 2001; Miller et al., 2011a; Mostert & Loxton, 2008; Rose et al., 2009).

However, consideration of other TAMHS evaluations reveals that these findings may be consistent with other projects. The RCT aspect of the National Evaluation of TAMHS concluded that the project had no impact upon the emotional difficulties of secondary school pupils (Department for Education, 2011) although it should be noted that this evaluation covers a wide range of projects and intervention in addition to FRIENDS.

There may be some delayed impact of FRIENDS, an additional four studies only found a difference at 4-12 months follow up (Barrett et al., 2005; Essau et al., 2012; Mostert & Loxton, 2008; Pahl & Barrett, 2010). This suggests that participation in the programme may have a delayed impact upon anxiety levels which may explain the results of the current study. Taking additional measures post intervention may have resulted in the identification of changes in anxiety. Unfortunately the end of the school year prevented continued monitoring.

However, to some extent the discrepancy between previous results and those reported in this study may reflect incompatibility between the methods of analysis used. The RCI is an “extremely conservative psychotherapy outcome measure” (Wise, 2004) compared to measures of difference such as the t-test. The size of the difference necessary for a t-test to indicate a significant difference between groups

may be relatively small with a large sample size. However, a change of a few points on the SCAS may not be a noticeable and beneficial change for an individual. As the current study used clinical significance and the RCI a larger change in pre and post scores would have been necessary, compared to group designs, in order for the change to be rated as significant. It is therefore not possible to directly compare the results of this study to previous research.

As limitations of measures such as the t-test are acknowledged, additional measures such as effect sizes may be used. The finding of the current study may be more similar to the findings of previous meta-analysis of FRIENDS when effect sizes are considered. Briesch et al. (2010) reported that FRIENDS only has a small effect size when used with children at risk of anxiety (ES $d=0.44$) or the general population (ES $d=0.24$).

Although effect sizes were not calculated in this study, as discussed in section 4.3.4, and would not be comparable to group design research effect sizes if they had been (Kratochwill, Hitchcock, Horner, Levin, Odom, Rindskopf, & Shadish, 2010), the minimal impact of the intervention on the anxiety levels of the participants in this case study may be consistent with previous findings of only a small effect size when the intervention is delivered by school staff.

The impact of participation in FRIENDS was also evaluated using a SCED. One of the advantages of SCED research is the ability to consider the response of individual participants to the intervention (Horner et al., 2005). Within this study one participant, Dina, was judged with *reasonable certainty* to have shown a practical and significant improvement in her emotional distress levels between phases. Although her anxiety levels were not elevated according to the SCAS, staff had identified her as anxious as she was quiet and withdrawn in class. Staff reported that they had noticed that she was less shy and participated more following participation in FRIENDS and the levels of emotional distress reported did appear to reduce during participation. There may, therefore, have been some benefit for this participant in participation in the programme.

For three participants it was judged as *not at all convincing* that a practical and significant improvement had occurred. For one participant, Benjamin, this reflected very low scores on both the SCAS and the PI-ED. It was not possible to show an improvement when the scores were already low. This may have reflected limitations in the selection of participants by the learning mentors. This will be discussed later.

The other two participants with similar *not at all convincing* judgements of reduction in emotional distress both had elevated levels of anxiety prior to participating in FRIENDS. Chand reported increased anxiety according to the SCAS post intervention and his scores on the PI ED remained high throughout the study. Despite the lack of change staff reported that the sensitivity and support seeking behaviours which had led to his selection for participation had reduced. This suggests that the practical changes reported by the learning mentors were not identified by the measures used.

Erina also had elevated emotional distress scores throughout the study with an increase in her PI ED scores. Again there is a discrepancy between the scores and staff reports of a positive response to the programme.

A number of possible explanations for these findings have been suggested. Firstly, they could imply that FRIENDS has only limited impact on emotional distress. However, notwithstanding the size of the study, as there was some deviation from the programme it is not possible to reach such a conclusion. It may be possible, however, to hypothesize that some of the omitted elements of the programme are the aspects responsible for altering coping skills and reducing emotional distress since evaluations of programmes containing these elements have been more successful.

Secondly, the results imply that FRIENDS, *as delivered* in the research context, has only limited impact on emotional distress. This appears to be a plausible explanation for the results obtained when considered against the background of more successful evaluations of FRIENDS. This would suggest that this problem could be addressed by increasing fidelity.

Thirdly, the characteristics of the participants and their individual circumstances may influence the impact of FRIENDS on reducing emotional distress. One aspect of this is

the selection of participants whose characteristics indicate they would benefit from participation in FRIENDS. Although the participants had been identified by the learning mentors as at risk of anxiety, using guidelines provided by TAMHS (see section 3.4.1.2) the results of the pre-intervention SCAS indicate that only two of the participants had elevated anxiety. One participant had very low scores on both the SCAS and PI-ED meaning it was not possible for him to show improvement in response to the programme. This raises questions regarding whether the training provided by TAMHS is sufficient to identify pupils who would benefit from the intervention. In particular many of the indicators of depression and anxiety suggested in the TAMHS training (see table 3.7) are not directly observable by school staff and only adults with a close relationship with the child may be aware of them. The selection and response of Aaron to the intervention highlights these issues and merits further consideration.

Aaron was identified for inclusion due to his outbursts of anger. There is some justification for this as 'fast and sustained physiological arousal' and 'irritability', were listed on the risk factors for anxiety and depression (see table 3.7) and there is some evidence that people with diagnoses of depression (Riley, Treiber, & Woods, 1989) and anxiety disorders (Moscovitch, McCabe, Antony, Rocca, & Swinson, 2008) experience more anger than people without these diagnoses. However, the link between anger and anxiety is not well established (Deschênes, Dugas, Fracalanza, & Koerner, 2012). In addition the SCAS indicated that Aaron did not report elevated levels of anxiety. It is uncertain, therefore, that Aaron's outbursts of anger do indicate anxiety and that participation in FRIENDS would reduce Aaron's outbursts of anger. The suitability of Aaron as a participant in terms of anxiety is therefore questionable although improvement of his coping skills may reduce his angry responses to stressful situations.

The ability of schools to correctly identify suitable participants in FRIENDS is an important aspect of the effectiveness of the programme. Further research is necessary to establish whether the participants selected by the TAMHS schools are those who are at risk of emotional distress. Other possible selection methods, such as screening

pupils using a tool such as the SCAS should be considered, although the reliability of such measures for selecting anxious children would need further evaluation.

Within the current study the participants responded in different ways to participation in FRIENDS with the most noticeable impact on a participant who reported a normal level of anxiety as measured by the SCAS. The two children with higher levels of anxiety were not judged to have improved. This is contrary to previous research which has indicated larger effects on more anxious children (Briesch et al., 2010).

Generalisations cannot be made from case study research but the findings suggest that it may be useful to conduct analysis of the data collected by TAMHS into the response of groups with different levels of anxiety to the intervention in order to identify those most likely to benefit from the programme in this context. If further evidence suggests that more anxious children are not responding to the programme in the local context then again, this may indicate the need for modifications. In addition, the practical benefits of providing the intervention to non-anxious children may need consideration particularly in relation to the costs of running the programme.

An alternative explanation to consider involves the learning capacity of the participants selected to participate. All, but one, of the participants were behind their peers in terms of literacy skills. The selection of this population is likely to reflect the increased time the learning mentors spend with this group offering educational support. The remaining participant is known, by the learning mentors, to have high levels of anxiety which may reduce classroom engagement. A possible hypothesis for the efficacy of the intervention in this context maybe in that the participants selected were those who typically find learning more difficult and a slower process than their peers. Such children are likely to be further disadvantaged by an adapted programme with fewer opportunities for skill consolidation. This hypothesis needs to be tested through additional research considering a link between academic ability and the ability to learn skills through participation in FRIENDS.

For two of the participants FRIENDS appeared to raise their level of emotional distress. A possible explanation of this finding is that participation in the intervention increased emotional awareness, sensitising the participants to the measures, which may have

resulted in higher SCAS scores and PI ED scores for these participants once the programme had begun. An alternative explanation is that there were limitations in the measures used. This will be explored further in section 5.5. It should be noted that improvements in anxiety perceived and reported by school staff may reflect staff bias in their interpretation of the efficacy of the intervention.

It is also likely that the levels of emotional distress reported reflect additional extraneous variable such as aspects of the pupils' contexts both in and out of school and the extent to which their emotions were mediated by skills learned through participation in FRIENDS is unknown.

5.4.3 The impact of participation in FRIENDS on coping

The results of this study indicate that two of the participants appeared to reduce their use of negative and avoidant coping skills but none of the participants appeared to increase their use of active coping skills.

Previous research into the impact of FRIENDS on coping skills has indicated that the programme's impact on coping skills is mixed. Lock and Barrett (2003); Stopa et al. (2010) and Essau et al. (2012) all reported a decline in cognitive avoidant problem solving (similar to negative and avoidant coping skills) post intervention. This was maintained at 12 month follow up except in Lock and Barrett (2003). However, an increase in the use of cognitive behavioural problem solving (similar to active coping skills) was only apparent in the girls participating in the Lock and Barrett (2003) study. The findings of this study appear consistent with the previous research.

The four key explanations regarding changes in anxiety are reflected here, namely;

- it may be that FRIENDS does not improve coping skills. Although the quality of implementation means that conclusions about the efficacy of FRIENDS cannot be drawn the previous literature indicating the impact of FRIENDS on coping skills is also inconclusive. This may be consistent with Lazarus (1999) view that psychologists may not yet know enough about how to teach people to cope better or even if coping is teachable.

- Secondly, an alternative explanation is that the results may reflect some of the limitations of the programme implementation in this context. In particular it has been noted that participants had less opportunity to practise using active coping skills, such as coping step plans, than the Manual suggested. Although participants may have become more aware of which coping skills were not helpful in the given scenarios perhaps they lacked the opportunity to develop, practise and evaluate replacement skills.
- Thirdly, the characteristics of the participants may have reduced their response to the intervention. Again it may be hypothesised that the academic ability and engagement of the participants impacted upon their learning of new skills. The selection of participants may also have impacted on this as there may be ceiling and floor effects on the measure.
- Fourthly, the effects of, or limitations of the measure used to assess coping skills must be acknowledged. This is discussed further in section 5.5.

In addition, it had been hoped that using a SCED would enable the relationship between the development of more appropriate coping skills and reductions in emotional distress to be tracked, thus providing an indication whether or not coping skills are part of the mechanisms underpinning emotional distress. However, the participant (Dina) who had the greatest change in her emotional distress had no change in her coping skills whilst the participants (Benjamin and Erina) who had some observable reduction in their use of negative and avoidant coping skills had no observable reduction of their distress. For each of these participants there appears to be no clear relationship between their coping skills and reported distress levels. This is contrary to the predictions of the FRIENDS programme (Barrett, 2010a, 2010b) and the theoretical models described in section 2.5 which suggest that improvement of coping skills is a factor contributing towards a reduction in emotional distress. It is therefore not possible to draw conclusions about the contribution of the modification of coping skills to the levels of emotional distress, or vice versa, from the current results.

5.5 Evaluation of the methodology employed

In order to answer the research question it was necessary to gain an understanding of the way in which FRIENDS had been delivered, the factors which had influenced this and to monitor the impact of the programme on the anxiety and coping skills of the participants.

Chapter 3 described possible limitations of the research design and approaches used to address these limitations. In addition further evaluation of the methods occurred during the research process, these will be discussed in the section below.

5.5.1 Evaluation of the research design

The research design chosen involved the use of both constructivist and post-positivist approaches. Although this enabled both evaluation of the intervention, using quantitative approaches, and exploration of the nature of the implementation, using qualitative approaches, certain incompatibilities between the measures became apparent. In trying to maintain the naturalistic implementation the researcher adopted a neutral positivist stance. This could be viewed as incompatible with both SCED research where typically the aim is to maximise programme fidelity and with constructivist and naturalistic approaches where the impact of the researcher within the context is acknowledged and accepted. This led to some difficult decisions, particularly in regard to the request for support from the learning mentors (see section 3.5.5). With hindsight these difficulties may have been resolved with the adoption of a qualitative case study approach to the evaluation and greater involvement of the researcher if requested.

5.5.2 Evaluation of method of collecting data about the implementation of FRIENDS

One of the main difficulties in this research process was in the collection of detailed information about the implementation of the programme. The learning mentors were asked to complete a weekly structured diary to show the aims of their session, the activities used, the extent to which they felt they achieved their aims, any improvements they would like to make and the engagement and response of the

participants. The diary was in the form of a booklet with an A4 sheet for each session and it was envisaged that this could be kept with the programme manual.

The diary was not completed by the learning mentors who cited a lack of time and then misplacement of the record, due to room changes necessitated by the building programme, as reasons for this. With hindsight it may have been better to include more likert scales to enable faster completion of the diary and perhaps to collect the evaluation sheets on a weekly basis. It was possible to gather details about the implementation of the programme from the learning mentors planning sheets but information about the quality of the delivery and response of the participants was lost.

Another limitation regarding the information collected about implementation of the programme was the reliance on the reports of the learning mentors. It would have been useful to have had independent observation of programme implementation in order to gauge adherence to the programme, quality of delivery and participant responsiveness. The researcher had decided not to observe the FRIENDS sessions on the basis that; direct observation would increase fidelity beyond that which would occur in a naturalistic setting and, as the researcher administered the weekly measures, her attendance at a FRIENDS session may reinforce the links between the programme and the measures and increase social desirability bias in the participant responses. With hindsight it would have been useful to ask a colleague, trained in delivering FRIENDS to observe and evaluate the implementation of a sample of FRIENDS sessions. This would also have enabled the accuracy of the learning mentors' evaluation to be assessed.

In addition it may have been useful to triangulate implementation information by gathering data about the implementation from all of the stakeholders e.g., the participants, the school SENCO, senior staff and parents in addition to the learning mentors. This may have enabled a greater understanding of the delivery of the programme to have been achieved.

5.5.3 Evaluation of the analysis of the implementation of FRIENDS

As described above the information about programme implementation was less complete than the researcher had hoped. To interpret this information a colleague was asked to consider independently the information and the conclusions reached were discussed to ensure agreement. This reduced researcher bias.

The information collected about the context of the implementation was analysed using activity theory. This provided a useful structure for organising the information collected and identifying factors mediating implementation. A limitation, however, was that this analysis was conducted by just one researcher. The conclusions would have been strengthened, and researcher bias reduced, if the analysis had also been conducted by another researcher to ensure that the features and contradictions identified were justified.

5.5.4 Evaluation of the use of Single Case Experimental Design

The steps taken in this research to meet quality indicators for SCEDs were discussed in chapter 3 (Table 3:13). A major limitation of the design used was that it was not possible for the researcher to manipulate the independent variable by introducing it to participants at different times, to create a true multiple baseline design, or by withdrawing it to create an ABAB design.

The SCED design achieved was an AB design. This would not meet design standards as it is difficult to rule out alternative explanations for any observed effects (Kratochwill et al., 2010; Kratochwill et al., 2012). The study would have been strengthened if several groups participating in the FRIENDS programme had been run in one school, beginning at different times. It would then have been possible to monitor individual participants in different groups in a multiple baseline SCED design.

Another limitation of the SCED was the length of the baseline phase. The baseline phase is important as it projects likely future performance against which responses following manipulation of the independent variable are assessed (Barlow et al., 2009; Kazdin, 1982). It is therefore important that the baseline is stable. Within this study the length of the baseline phase was determined by the school's timetable for

implementing FRIENDS. In order to complete the programme before the end of the school year implementation needed to begin before the Easter holidays. This meant that only 4 weeks were available for the collection of baseline measures after participants were selected and consent gained. Some of the baselines collected during this time were unstable which made the visual analysis of the graphs more challenging and the interpretations of the graphs more tentative. Ideally a relationship with the school would have been developed at an earlier stage to enable baseline measures to be collected for sufficient length of time for a more stable pattern of results to have become apparent.

In addition some previous research has found participation in FRIENDS impacts on anxiety only at 12 month follow up rather than during and post intervention (Barrett et al., 2005; Essau et al., 2012; Mostert & Loxton, 2008; Pahl & Barrett, 2010; Stallard et al., 2007). This suggests that the findings of this research may have indicated greater impact if weekly monitoring had continued post intervention in order to detect any continued change in the use of coping skills. This was not possible due to the position of the research at the end of the school year, and working arrangements which did not facilitate this subsequently.

Another limitation of the SCED design was the visual analysis of the graphs for evidence of 'practical and significant improvement'. This phrase has been previously used in SCED research (Parker & Brossart, 2003), (Brossart et al., 2006) to refer to the change noted by individuals rating the response of participants to an intervention using visual analysis of the SCED graph. In this instance the phrase 'practical and significant' refers to a subjective judgement of the observable magnitude of the change, rather than statistical significance, and whether the change is likely to make a noticeable difference to the experiences of that individual. With hindsight the researcher realised that the use of the self-report measures do not reflect any practical behavioural changes which would be identifiable to an independent rater. In order to ascertain practical changes in emotional distress or coping skills the self-report measures would need to be triangulated with other information such as the observations of family and adults who regularly interact with the child. It may have

been better to change the wording of the question to “How certain are you that the child’s responses reflect a significant improvement in their (level of emotional distress / selection of coping skills) from the baseline to the intervention phase”.

5.5.5 The evaluation of the use of self-report measures

Considerations when using self-report measures have been identified in chapter 3 (Table 3:12). The main concerns highlighted were the reliability of self-report measures which may be vulnerable to social desirability bias, the degree to which the child has sufficient self-awareness to respond (Wigelsworth, Humphrey, Kalambouka, & Lendrum, 2010) and the motivation and cognitive abilities of the participants (Borgers, Sikkels, & Hox, 2004). In addition, the extent to which the measures can reflect the levels of emotional distress, anxiety and coping skills can be questioned, particularly with reference to the reports, from the learning mentors, of more positive responses to participation in FRIENDS than have been captured by the measures used (Section 5.4.2).

Within a SCED methodology a further limitation is the repeated use of the measures on a weekly basis and the risk of practice effects. It is possible that the participants repeated their previous responses on a weekly basis. To reduce this possibility participants were reminded to think about the past week before completing their PI-ED assessments and to read the vignette and try to imagine themselves in the scenario before completing the Kidcope measure. The repetition may also reduce levels of engagement with the assessment although the repetition may also have the benefit of reducing social desirability bias once it has been established that there are no positive or negative outcomes resultant upon the answers given.

In addition a number of additional concerns with the individual measures were identified during the research. These are discussed below.

5.5.5.1 PI ED

The score achieved weekly is likely to vary in relation to what was happening in the participants’ lives. This means that attributing changes in the level of emotional distress to participation in FRIENDS is difficult without understanding the context

behind the score. It may have strengthened understanding of the SCED graph if participants had been asked to keep a record of significant events occurring in their lives in order to understand their distress levels with greater context. Daily monitoring of anxiety using a very simple likert scale may also have been useful. The PI ED was also likely to reflect the participants' moods when they completed the scale rather than over the previous week although participants were reminded to consider the previous week in order to avoid this.

5.5.5.1.1 Daily measurement of hassles and anxiety

One possible method of measuring levels of anxiety on a daily basis is the use of single item scales. These are simple and brief to administer. They can take the form of lines, which have the advantage of being sensitive to small changes and avoiding ambiguous language (Aitken, 1969); numbers, which have been criticised for being more categorical and for the possibility that responses may be skewed by favourite numbers (Aitken, 1969); or pictures of faces expressing emotion, which are suggested to be easier for young children to use and also avoid language although they are categorical in nature (McMurtry, Noel, Chambers, & McGrath, 2011).

A Visual Analogue Scale, such as the VAS-anxiety (Bringuier, Dadure, Raux, Dubois, Picot, & Capdevila, 2009), consists of a 100mm horizontal line with two end points, one labelled "no anxiety or fear" the other "worst possible anxiety or fear". The participant then marks the point which corresponds to their anxiety at that time. The position along the line can be measured in mm. This method indicates the relative anxiety for an individual from measurement to measurement. It also has the advantage of being quick to administer. Bringuier et al. (2009) found that the VAS anxiety correlated significantly with a standardised measure (the State-Trait Anxiety Inventory for Children) in a study of children's pre and post-operative anxiety.

Within the current study it would have been useful to ask the participants to complete a single item scale at the same time each day either at home or school. This would have given additional information regarding the fluctuating levels of anxiety the participants experienced and also cued the participants into their emotions on a daily basis which may improve the reliability of the PI-ED responses. This could be achieved

using paper scales but perhaps more appealing to young people would be the use of mobile phones to complete a scale when a reminder is heard (Preziosa, Grassi, Gaggioli, & Riva, 2009).

5.5.5.2 KIDCOPE

Four vignettes were provided as stimulus for the Kidcope in an attempt to reduce the possibility of participants simply repeating their answers on a weekly basis. Despite this it may have been difficult for the participants to engage fully in the different situations presented. The weekly repetition of the measure may therefore have reduced its ability to measure change in coping skills selection. The use of the Kidcope may be better suited to pre and post intervention evaluation.

Within this study the methodological and ethical difficulties of measuring coping skills are acknowledged. In particular the decision has to be made between comparing responses to hypothetical scenarios or to real experiences (Schwarzer & Schwarzer, 1996). In this research the former approach was used to enable comparison between responses to a situation over a period of time to be analysed. This meant that the participants reported how they *thought* they should behave rather than how they actually *did* behave. Ecological validity was therefore sacrificed for internal validity and ethical acceptability.

The creation of the vignettes of coping scenarios may have reduced the personal significance of the situation for the participant. An alternative may have been to ask each participant to present a selection of their own stressful situations for review over the course of the research. Lazarus (1999) suggests that a narrative approach is useful with stressful situations being observed or videoed and the participants invited to expand upon their feelings and appraisals. However as well as being time consuming and impractical to achieve this it was also considered unethical to cause distress by asking participants to consider previously stressful experiences, and how they handled these, on a weekly basis. An alternative may have been to conduct a diagnostic interview pre and post intervention. However, this would have lost the potential advantages of using a SCED which can be useful to identify the link between emotional

distress and underpinning mechanisms. Additionally the researcher did not feel she had the skill or experience to undertake such interviews.

In trying to assess coping skills on a weekly basis in an ethically acceptable way it is acknowledged that the methodology employed may not have revealed what coping skills the participants would *use* in a challenging situation. However, it is believed that the methodology employed did have the potential to show what the participants had *learned* about coping skills through the application of their knowledge to the scenarios.

5.5.5.3 SCAS

One of the limitations of the SCAS is its limited reliability as a measure. The test-retest reliability of 0.63 (Spence et al., 2003) means that large changes need to have occurred to be sure of a reliable change according to the RCI. The SCAS was chosen as it is the most commonly used measure in evaluations of FRIENDS however in hindsight it may have been better to use an anxiety measure with greater reliability such as the Revised Children's Manifest Anxiety Scale (the second most commonly used measure) which has a test-retest reliability over 7 days of 0.88 and over 5 weeks of 0.77 (Wisniewski, Mulick, Genshaft, & Coury, 1987). This would enable clinical significance to be calculated with smaller confidence limits.

It may have been useful to use some alternatives to self-report measures. This could have included measures completed by school staff and parents. In some SCEDs it is possible to include observation of behaviour to triangulate with other information, however in this research it was felt that the behaviour associated with anxiety may not occur with sufficient frequency and predictability to enable observational measures to be obtained.

5.5.6 Conclusions regarding methodology employed

The research designs employed enabled the researcher to examine the delivery of FRIENDS within a mainstream secondary school, by learning mentors trained through the local TAMHS programme, and to monitor the response of the participants in terms of anxiety levels and coping skills. The methodology and analysis employed was useful

in allowing the researcher to understand some of the factors contributing to the fidelity levels achieved, so revealing ideas for improving this fidelity in the future.

The SCED research, however, did not achieve ideal quality standards and would benefit from being conducted in an environment where a multiple baseline design is possible to enhance internal validity (Kratochwill et al., 2010).

In addition the SCED aspect of the research did not produce the hypothesised results. It is unclear as to the degree to which the level of intervention fidelity achieved or type II errors, resulting from the limitations of the measures used, contributed to these findings. It may be useful to establish this by repeating the design in more closely controlled conditions in order to assess the reliability and validity of the design and measures employed. This would enable SCED approaches to be used with greater confidence.

Nevertheless, despite these 'limitations', this method did offer the 'ideographic' data anticipated by single subject designs, and highlight important questions and challenges both to the use of the FRIENDS intervention, in practice and theory, and to the research evidence upon which it is founded, where reliance upon group and randomised studies may have masked some of the potential effects for the individual. Ethically and scientifically this is an example of how single subject data can support the development of robust, rigorous and appropriately scrutinised evidence bases for applied practice.

5.6 Implications of the Results

The methodology used in this study has allowed an in depth analysis of the implementation and impact of FRIENDS in a single real world setting. Although it is not possible to generalise to other settings from case study and small sample research, it is possible to understand a real life context in depth (Yin, 2009) and to identify patterns and links which *may* be applicable in other contexts (Thomas, 2011). The findings of this study may have a number of implications for the local context and TAMHS project, for the wider community and for EPs in terms of evaluating FRIENDS and implementing interventions in general.

5.6.1 The implications within the research setting

The findings of this study indicate that within the research setting there were limitations in terms of programme implementation and the impact of FRIENDS on the participants. This suggests that this school requires additional support in order to improve the effectiveness of FRIENDS. This is being addressed by the school's EP who is running additional training and providing on-going support for the learning mentors during their subsequent delivery of FRIENDS.

5.6.2 Implications for TAMHS

The findings of this study, and their relationship with the findings of other studies, raise a number of questions regarding the local TAMHS project:

- Should the TAMHS project be targeted at secondary age children or should the focus be on the primary age range?
- Should additional support and training in participant selection, programme planning and programme delivery, be made available to schools wishing to implement FRIENDS?
- Should monitoring of fidelity be included as part of the TAMHS project?
- Should the TAMHS project include more training and support for schools in organising and implementing interventions in general as well as in delivering specific programmes?

The findings of this study support previous evaluations regarding the impact of TAMHS on secondary age pupils. There is evidence from previous evaluations of FRIENDS which suggests that the programme is more beneficial for younger pupils. This needs to be evaluated in terms of the most appropriate use of resources.

Another interpretation of the findings of this study may be that current TAMHS methods of disseminating FRIENDS to schools, through two days training, may be insufficient. Evaluations of FRIENDS, introduced as part of the TAMHS project, in other localities have similar findings. Issues to address may include training and support to, identify participants, adapt the programme and to pre-empt the difficulties of implementing FRIENDS within a complex organisation with other demands upon the available time and resources.

In particular additional training and support may be required in order to select participants. Schools may benefit from discussing possible candidates for the programme with their educational psychologists to establish suitability or using a screening measure to identify pupils with elevated anxiety. The latter approach will involve requests for parental permission for all pupils to be screened and consideration of selection criteria and the ability of the school to support all identified pupils.

Further training and support may also help staff implement FRIENDS with a high level of fidelity and to adapt the programme without omitting core aspects of the programme. The extent of this issue in other local TAMHS schools needs to be established through additional research as outlined below. Depending upon the needs identified, practice may need to be altered to include additional fidelity monitoring and support from TAMHS staff. The requirement for fidelity checks may also reduce adaptation of the programme.

It may also be beneficial for the TAMHS project to do more initial work with schools regarding organising programme delivery in terms of commitment, available time, space, and staffing.

This additional work would increase demands upon both school and TAMHS resources. Although this may be beneficial for the programme there may be associated costs in

terms of levels of school participation and the availability of TAMHS resources for other projects which would have to be considered. The evaluation of such additional support will be useful in contributing to an understanding of the requirements for successful programme implementation both locally and at a wider level.

These issues would benefit from additional research for clarification but broadly appear to have similarities with other TAMHS evaluations. This suggests that the implications for the local TAMHS project may have national applicability and that some of the suggested additional research and improvements need consideration before similar national projects are developed.

5.6.3 Wider implications of the findings

It is not possible to generalise regarding the efficacy of FRIENDS in reducing anxiety and altering coping strategies from this case study research. In addition, the reduced programme fidelity means that conclusions regarding the efficacy of FRIENDS, even if a larger and more representative sample were under consideration, would be inappropriate.

However, this study does add to the wider understanding of the impact of the FRIENDS programme by highlighting possible limitations in efficacy when the programme is delivered in real world settings. Although the identified features of the context in which FRIENDS was implemented cannot be generalised to other contexts the findings do demonstrate factors which *may* reduce the efficacy of the programme. These include the knowledge and training of the facilitators, the on-going support available for implementing the programme, the availability of time and resources within school, and support from the wider school community.

These findings of the research also raise questions as to the extent to which the programme delivery model suggested by Pathways HRC, who license FRIENDS, and used by TAMHS, is sufficient to ensure adequate levels of fidelity to the programme for participation to be beneficial. This model suggests that a member of the Pathways team trains some facilitator trainers, in this instance EPs, who then train the facilitators from the schools. Additional resources are available on the Pathways web site

<http://pathwayshrc.com.au/>. The findings of this study suggest that this model may be insufficient for adequate programme implementation in some schools.

5.6.4 Implications for Educational Psychologists

By considering how the programme was implemented, and the factors contributing to this, this research contributes to the wider understanding of the FRIENDS intervention when used within a complex real life setting without the levels of support and fidelity checks often available during evaluation research. In particular, it highlights some of the factors which EPs may need to consider when supporting schools to deliver this intervention with high levels of fidelity, particularly when the programme requires modification. These include checking that the skills and training of the programme implementers are sufficient, that there is time available for delivering the programme and for seeking support, and that there is support for the programme from individuals within the school with the power to prioritise and support programme delivery. These issues can be extrapolated to other interventions introduced within schools.

The findings of this research have provided an example of the levels of implementation achieved through training alone. Although these findings cannot be generalised to all settings they are also unlikely to be unique. These findings therefore demonstrate that training and an instruction manual will not be sufficient to enable high quality implementation in all settings and it has been suggested that EPs provide on-going support to ensure high levels of fidelity.

During this research activity theory was a useful tool to structure exploration of the contextual factors impacting upon the implementation of the programme. This tool may be one method which EPs can use to explore and highlight some of the contextual factors and contradictions which may need to be addressed before an intervention can be introduced.

SCED research may also be useful for EPs. As Ferron, Bell, Hess, Rendina-Gobioff, and Hibbard (2009) have acknowledged it is useful to have research designs which are closely aligned to professional practice. Use of SCED designs has the advantage of

both evaluating the impact of EPs work and being methodologically robust enough to contribute to the evidence base for the approach taken.

5.7 Future Research

A number of areas for further research have been identified during the discussion of the findings. The findings of this study suggest that the school in question may not have been equipped to deliver the programme. This question can be generalised asking:

- Are schools equipped to deliver FRIENDS effectively?

The results suggest that implementation of the FRIENDS programme in this school, by mentors trained through the TAMHS project, varied from the manualised programme due to a number of factors. This raises questions regarding whether similar limitations may occur within other schools in the authority, trained in the same way, and also within schools more widely. Further qualitative interview and fidelity checks in schools delivering FRIENDS would be useful to establish the extent to which other schools have similar difficulties.

If the findings suggest that schools are not equipped to deliver FRIENDS then this raises a number of additional questions.

1. Firstly, should FRIENDS be delivered by school teachers, teaching assistants or by psychologists or qualified Cognitive Behavioural Therapy practitioners?
2. Secondly, if schools are not equipped to deliver FRIENDS then what is needed to equip them:
 - a. Guideline and qualification requirements for the facilitators?
 - b. Further training?
 - c. On-going support from EPs during the programme?
 - d. Increased involvement and support from the school senior leadership team?
 - e. Guidelines about selection of groups of participants?

Further research is required in order to establish which of these additional supports would be beneficial to the delivery of FRIENDS. In the local TAMHS context this may

be explored using Action Research methodologies to evaluate the impact of increased support within schools. Across a wider context it may be helpful to establish group design research comparing the impact of different types of support on both participant outcomes and fidelity to the programme.

5.8 Overall Conclusions

5.8.1 Summary of Findings

This research presents a case study of FRIENDS implemented in a secondary school by learning mentors trained through the local TAMHS project.

The study found that the FRIENDS programme implemented by the learning mentors deviated from the Manual. A number of mediating factors which may have contributed to this reduced implementation fidelity were identified by using activity theory to consider the context. These factors include; the experience, skill and training of the learning mentors to modify and deliver the programme, the nature of the relationship between the learning mentors and the participants, the time allocated to deliver the programme, the selection of participants and the contextual factors which interrupted the implementation of the programme.

Referring to the SCED results it appeared uncertain that participation in the FRIENDS programme, as it was implemented, reduced anxiety and / or changed coping skills in the participants. This may reflect the fidelity to the programme achieved. If so this study provides additional evidence to support previous findings that reduced implementation fidelity results in less impact and that the effects of FRIENDS when delivered by school staff are small.

Alternatively the results of the SCED may also reflect the limitations of the measures used. Further use of this design in highly controlled conditions may be needed to establish the reliability and validity of the design.

5.8.2 The Unique Contribution of the research

The researcher considers that this research has made a unique contribution by extending previous research into the efficacy of FRIENDS by using an alternative

methodology to allow detailed analysis of implementation and effectiveness within a real world context. The findings have implications for other organisations training school staff to implement FRIENDS, the model suggested by the developers of FRIENDS. A number of factors which impacted upon implementation were identified and can potentially form the basis of modifications to the support provided to schools or as the basis for further research. These implications may also be extended to apply to the implementation of other interventions.

Additionally, this research has made use of methodologies that may be useful for EPs in their evaluation of their own work. Single case experimental design, measurement of clinical significance and analysis of complex situations using activity theory are all methodologies which can be used by EPs within the constraints of their work.

References

6 References

Primary References

- Achenbach, T. . (1991). *Manual for the Child Behavior Checklist/4 - 18 and 1991 Profile*. Burlington, VT: University of Vermont.
- Agostinis, A., Morley, S.J., & Dowzer, C.N. (2008). The Leeds Reliable Change Index Calculator. Retrieved from <http://www.leeds.ac.uk/lihs/psychiatry/dclin/rcic.html>
- Aitken, Robert C. (1969). Measurement of feelings using visual analogue scales. *Proceedings of the royal society of medicine*, 62(10), 989.
- Alise, M. A., & Teddlie, C. (2010). A continuation of the paradigm wars? Prevalence rates of methodological approaches across the social/behavioral sciences. *Journal of Mixed Methods Research*, 4, 103-126
- Andrews, R. (2005). The place of systematic reviews in education research. *British Journal of Educational Studies*, 53(4), 399-416.
- APA, American Psychological Association. (2001). *APA Manual*: Amer Psychological Assn.
- Ardoin, S., & Daly, E. (2007). Introduction to the Special Series: Close Encounters of the Instructional Kind—How the Instructional Hierarchy is Shaping Instructional Research 30 Years Later. *Journal of Behavioral Education*, 16(1), 1-6. doi: 10.1007/s10864-006-9027-5
- Athens, L. (2010). Naturalistic inquiry in theory and practice. *Journal of Contemporary Ethnography*, 39(1), 87-125.
- Avis, J. (2009). Transformation or transformism: Engeström's version of activity theory? *Educational Review*, 61(2), 151-165. doi: 10.1080/00131910902844754
- Baer, D.M. (1977). Perhaps it would be better not to know everything. *Journal of Applied Behavior Analysis*, 10(1), 167.
- Bakhurst, D. (2009). Reflections on activity theory. *Educational Review*, 61(2), 197-210. doi: 10.1080/00131910902846916
- Barlow, D. H., & Hersen, M. (1984). *Single Case Experimental Designs - strategies for studying behavior change* (2nd Edition ed.). Oxford: Pergamon Press.
- Barlow, D.H., Nock, M., & Hersen, M. (2009). *Single Case Experimental Designs: Strategies for Studying Behavior for Change*. London: Pearson/Allyn and Bacon.
- Barrett, P. (2000). Treatment of childhood anxiety: Developmental aspects. *Clinical Psychology Review*, 20(4), 479-494.
- Barrett, P. (2004). *Friends for life - Group Leaders Manual for children*. Bowen Hills, Australia: Australian Academic Press.
- Barrett, P. (2007). Introduction to Friends, from <http://www.friendsinfo.net/downloads/FRIENDSintrobooklet.pdf>
- Barrett, P. (2010a). *FRIENDS for life - Group Leaders Manual for children*. Nottingham: Barrett Research Resources Pty Ltd.
- Barrett, P. (2010b). *My Friends - Youth Resiliency Program: Group Leaders' Manual for Youth*. Nottingham: Barrett Research Resources Pty Ltd.
- Barrett, P., & Pahl, K.M. (2006). School-Based Intervention: Examining a Universal Approach to Anxiety Management. *Australian Journal of Guidance and Counselling*, 16(1), 55-75.
- Barrett, P., & Turner, C. (2001). Prevention of anxiety symptoms in primary school children: Preliminary results from a universal school-based trial. *Journal of Clinical Psychology*, 40, 399-410.

- Barrett, P.M., Duffy, A.L., Dadds, M.R., & Rapee, R.M. (2001). Cognitive-behavioral treatment of anxiety disorders in children: Long-term (6-year) follow-up. *Journal of Consulting and Clinical Psychology, 69*(1), 135-141. doi: 10.1037/0022-006x.69.1.135
- Barrett, P.M., Farrell, L.J., Ollendick, T.H., & Dadds, M. (2006). Long term outcomes of an Australian universal preventative trial of anxiety and depression symptoms in child and youth: An evaluation of the Friends Program. *Journal of Clinical Child and Adolescent Psychology, 35*(3), 403-411.
- Barrett, P.M., Lock, S., & Farrell, L.J. (2005). Developmental differences in universal preventive intervention for child anxiety. *Clinical Child Psychology and Psychiatry, 10*(4), 539-555.
- Barrett, P.M., Moore, A.F., & Sonderegger, R. (2000). The FRIENDS Program for Young Former-Yugoslavian Refugees in Australia: A Pilot Study. *Behaviour Change, 17*(03), 124-133. doi: doi:10.1375/behc.17.3.124
- Barrett, P.M., Rapee, R.M., Dadds, M.M., & Ryan, S.M. (1996). Family enhancement of cognitive style in anxious and aggressive children. *Journal of Abnormal Child Psychology, 24*(2), 187-203.
- Barrett, P.M., Shortt, A.L., Fox, T.L., & Westcombe, K. (2001). Examining the Social Validity of the FRIENDS Treatment Program for Anxious Children. *Behaviour Change, 18*(02), 63-77. doi: doi:10.1375/behc.18.2.63
- Barrett, P.M., Sonderegger, R., & Sonderegger, N.L. (2001). Evaluation of an anxiety-prevention and positive-coping program (FRIENDS) for children and adolescents of non-English-speaking background. *Behaviour Change, 18*(2), 78-91.
- Barrett, P.M., Sonderegger, R., & Xenos, S. (2003). Using Friends to Combat Anxiety and Adjustment Problems among Young Migrants to Australia: A National Trial. *Clinical Child Psychology and Psychiatry, 8*(2), 241-260. doi: 10.1177/1359104503008002008
- Beck, A.T. (1967). *Depression: Clinical, Experimental, and Theoretical Aspects*: Hoeber Medical Division, Harper & Row.
- Beck, A.T., & Emery, G. (2005). *Anxiety Disorders and Phobias*. Cambridge MA: Basic Books.
- Beck, J.S., Beck, A.T., Jolly, J., & Steer, R. (2005). *Beck Youth Inventories 2nd edition for children and young people*. Oxford: Pearson assessment.
- Beesdo, K., Pine, D. S., Lieb, R., & Wittchen, H. (2010). Incidence and risk patterns of anxiety and depressive disorders and categorization of generalized anxiety disorder. *Archives of General Psychiatry, 67*(1), 47-57. doi: 10.1001/archgenpsychiatry.2009.177
- Bernstein, G.A., Layne, A.E., Egan, E.A., & Tennison, D.M. (2005). School-Based Interventions for Anxious Children. *Journal of the American Academy of Child & Adolescent Psychiatry, 44*(11), 1118-1127. doi: 10.1097/01.chi.0000177323.40005.a1
- Blakely, C., Mayer, J., Gottschalk, R., Schmitt, N., Davidson, W., Roitman, D., & Emshoff, J. (1987). The fidelity-adaptation debate: Implications for the implementation of public sector social programs. *American journal of community psychology, 15*(3), 253-268. doi: 10.1007/bf00922697
- Borgers, Natacha, Sikkels, Dirk, & Hox, Joop. (2004). Response Effects in Surveys on Children and Adolescents: The Effect of Number of Response Options, Negative Wording, and Neutral Mid-Point. *Quality and Quantity, 38*(1), 17-33. doi: 10.1023/B:QUQU.0000013236.29205.a6
- BPS. (2006). *Code of Ethics and Conduct*. Leicester: The British Psychological Society.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi: 10.1191/1478088706qp0630a

- Briesch, A., Hagermoser Sanetti, L., & Briesch, J. (2010). Reducing the Prevalence of Anxiety in Children and Adolescents: An Evaluation of the Evidence Base for the FRIENDS for Life Program. *School Mental Health*, 2(4), 155-165. doi: 10.1007/s12310-010-9042-5
- Bringuier, Sophie, Dadure, Christophe, Raux, Olivier, Dubois, Amandine, Picot, Marie-Christine, & Capdevila, Xavier. (2009). The Perioperative Validity of the Visual Analog Anxiety Scale in Children: A Discriminant and Useful Instrument in Routine Clinical Practice to Optimize Postoperative Pain Management. *Anesthesia & Analgesia*, 109(3), 737-744. doi: 10.1213/ane.0b013e3181af00e4
- Brossart, D.F., Parker, R.I., Olson, E.A., & Mahadevan, L. (2006). The relationship between visual analysis and five statistical analyses in a simple AB single-case research design. *Behavior Modification*, 30(5), 531-563.
- Burr, V. (2003). *Social Constructionism* (2nd ed.). London: Routledge.
- Calear, A.L., & Christensen, H. (2010). Systematic review of school-based prevention and early intervention programs for depression. *Journal of Adolescence*, 33(3), 429-438. doi: 10.1016/j.adolescence.2009.07.004
- Chen, H.T. (2006). A theory-driven evaluation perspective on mixed methods research. *Research in the Schools*, 13(1), 75-83.
- Clarke, V. (2011). *A Randomised Control Trial of the 'FRIENDS for Life' Programme: Evaluating the Impact on Children's Anxiety, Resilience and Behaviour*. (Doctorate of Applied Educational Psychology), University of Nottingham, Nottingham.
- Cohen, J. (1968). Weighted kappa: Nominal scale agreement provision for scaled disagreement or partial credit. *Psychological bulletin*, 70(4), 213-220. doi: 10.1037/h0026256
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.
- Cohen, L., & Manion, L. (1994). *Research Methods in Education*. London: Routledge.
- Cole, D.A., Peeke, L.G., Martin, J.M., Truglio, R., & Seroczynski, A.D. (1998). A longitudinal look at the relation between depression and anxiety in children and adolescents. *Journal of Consulting and Clinical Psychology*, 66(3), 451-460. doi: 10.1037/0022-006x.66.3.451
- Collishaw, S., Maughan, B., Natarajan, L., & Pickles, A. (2010). Trends in adolescent emotional problems in England: a comparison of two national cohorts twenty years apart. *Journal of Child Psychology and Psychiatry* 51(8), 885-894.
- Compton, S.N., March, J.S., Brent, D., Albano, A.M., Weersing, V. R., & Curry, J. (2004). Cognitive-Behavioral Psychotherapy for Anxiety and Depressive Disorders in Children and Adolescents: An Evidence-Based Medicine Review. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43(8), 930-959.
- Cooley-Strickland, M.R., Griffin, R.S., Darney, D., Otte, K., & Ko, J. (2011). Urban African American Youth Exposed to Community Violence: A School-Based Anxiety Preventive Intervention Efficacy Study. *Journal of Prevention & Intervention in the Community*, 39(2), 149-166. doi: 10.1080/10852352.2011.556573
- Cooley, M.R., Boyd, R.C., & Grados, J.J. (2004). Feasibility of an Anxiety Preventive Intervention for Community Violence Exposed African-American Children. *The Journal of Primary Prevention*, 25(1), 105-123. doi: 10.1023/B:JOPP.0000039941.85452.ea
- Costello, E Jane, Mustillo, Sarah, Erkanli, Alaattin, Keeler, Gordon, & Angold, Adrian. (2003a). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archives of General Psychiatry*, 60(8), 837.

- Costello, E.J., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003b). Prevalence and Development of Psychiatric Disorders in Childhood and Adolescence. *Arch Gen Psychiatry*, 60, 837-844.
- Creswell, J.W., & Plano Clark, V.L. (2011). *Designing and Conducting Mixed Methods Research* (2nd ed.). London: SAGE.
- Dadds, M.R., & Barrett, P.M. (2001). Practitioner review: Psychological management of anxiety disorders in childhood. *Journal of Child Psychology and Psychiatry*, 42(8), 999-1011.
- Dadds, M.R., Perrin, S., & Yule, W. (1998). Social Desirability and Self-Reported Anxiety in Children: An Analysis of the RCMAS Lie Scale. *Journal of Abnormal Child Psychology*, 26(4), 311-317. doi: 10.1023/a:1022610702439
- Dane, A.V., & Schneider, B.H. (1998). Program integrity in primary and early secondary prevention: are implementation effects out of control? *Clinical Psychology Review*, 18(1), 23-45.
- Daniels, H. (2001). *Vygotsky and Pedagogy*. London: Routledge Falmer.
- Daniels, H. (2004). Activity theory, discourse and Bernstein. *Educational Review*, 56(2), 121-132. doi: 10.1080/0031910410001693218
- Davies, P., Newcomer, K., & Soydan, H. (2006). Government as Structural Context for Evaluation. In I.F. Shaw, Greene, J.C., Mark, M.M., (Ed.), *The Sage Handbook of Evaluation*. London: Sage.
- DCSF. (2008). *Targeted Mental Health in Schools Project Using the evidence to inform your approach: a practical guide for headteachers and commissioners*. Nottingham: DCSF Publications Retrieved from <https://www.education.gov.uk/publications/eOrderingDownload/00784-2008BKT-EN.pdf>.
- Dent, R.J., & Cameron, R. J. Sean. (2003). Developing Resilience in Children Who are in Public Care: The educational psychology perspective. *Educational Psychology in Practice: theory, research and practice in educational psychology*, 19(1), 3-19.
- Department for Communities and Local Government, DfClg. (2011). The English Indices of Deprivation 2010. <http://www.communities.gov.uk/documents/statistics/pdf/1871208.pdf>
- Department for Education, DfE. (2011). *Me and My School: findings from the national evaluation of Targeted Mental Health in Schools 2008-2011*. Retrieved from <https://www.gov.uk/government/publications/findings-from-the-national-evaluation-of-targeted-mental-health-in-schools-2008-to-2011#downloadableparts>.
- DeProspero, A., & Cohen, S. (1979). Inconsistent visual analyses of intrasubject data. *Journal of Applied Behavior Analysis*, 12(4), 573.
- DES. (2012). *Becoming school support staff: Learning Mentors*. Retrieved from <http://www.education.gov.uk/schools/careers/traininganddevelopment/staff/b00202532/school-support-staff/roles/welfare/learning-mentor>.
- Deschênes, Sonya S, Dugas, Michel J, Fracalanza, Katie, & Koerner, Naomi. (2012). The role of anger in generalized anxiety disorder. *Cognitive behaviour therapy*, 41(3), 261-271.
- Domitrovich, C.E., & Greenberg, M.T. (2000). The study of implementation: Current findings from effective programs that prevent mental disorders in school-aged children. *Journal of Educational and Psychological Consultation*, 11(2), 193-221.
- Dopheide, J.A. (2006). Recognizing and treating depression in children and adolescents. *American Journal of Health System Pharmacy*, 63(3), 233-243.
- Durlak, J.A. (2009). How to select, calculate, and interpret effect sizes. *Journal of Pediatric Psychology*, 34(9), 917-928.

- Durlak, J.A., & DuPre, E.P. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology*, 41(3), 327-350.
- Elias, M.J., Zins, J.E., Graczyk, P.A., & Weissberg, R.P. (2003). Implementation, sustainability, and scaling up of social-emotional and academic innovations in public schools. *School Psychology Review*, 32(3), 303-319.
- Elliott, D.S., & Mihalic, S. (2004). Issues in disseminating and replicating effective prevention programs. *Prevention Science*, 5(1), 47-53.
- Engestrom, Y. (1999). Activity theory and individual and social transformation. In Y. Engestrom, R. Miettinen & R. Punamaki (Eds.), *Perspectives on Activity Theory*. Cambridge: Cambridge University Press.
- Eodanable, M., & Lauchlan, F. (2009). The advance of research and evaluation skills by EPs: implications for training and professional development. *Educational Psychology in Practice*, 25(2), 113-124. doi: 10.1080/02667360902905114
- Erlandson, D.A. (1993). *Doing Naturalistic Inquiry: A Guide to Methods*: SAGE Publications.
- Essau, C.A., Conradt, J., Sasagawa, S., & Ollendick, T.H. (2012). Prevention of Anxiety Symptoms in Children: Results From a Universal School-Based Trial. *Behavior Therapy*, 43(2), 450-464. doi: 10.1016/j.beth.2011.08.003
- Essex TaMHS project, Essex. (2011). ESSEX TARGETED MENTAL HEALTH IN SCHOOLS (TAMHS) PROJECT 2010-2011.
- Evans, J., & Benefield, P. (2001). Systematic Reviews of Educational Research: Does the medical model fit? *British Educational Research Journal*, 27(5), 527-541.
- Evans, J., Harden, H., & Thomas, J. (2004). What are effective strategies to support pupils with emotional and behavioural difficulties (EBD) in mainstream primary schools: Findings from a systematic review of research. *Journal of Research in Special Educational Needs*, 4(1), 2-16.
- Farrell, L.J., Barret, P.M., & Claassens, S. (2005). Community trial of an evidence based anxiety intervention for children and adolescents (the FRIENDS Program): A pilot study. *Behaviour Change*, 22(4), 236-248.
- Feilzer, M.Y. (2010). Doing Mixed Methods Research Pragmatically: Implications for the Rediscovery of Pragmatism as a Research Paradigm. *Journal of Mixed Methods Research*, 4(1), 6-16. doi: 10.1177/1558689809349691
- Ferguson, R.J., Robinson, A.B., & Splaine, M. (2002). Use of the reliable change index to evaluate clinical significance in SF-36 outcomes. *Quality of Life Research*, 11(6), 509-516.
- Ferron, J.M., Bell, B.A., Hess, M.R., Rendina-Gobioff, G., & Hibbard, S.T. (2009). Making treatment effect inferences from multiple-baseline data: The utility of multilevel modeling approaches. *Behavior Research Methods*, 41(2), 372-384. doi: 10.3758/brm.41.2.372
- Fisak, B., Richard, D., & Mann, A. (2011). The Prevention of Child and Adolescent Anxiety: A Meta-analytic Review. *Prevention Science*, 12(3), 255-268. doi: 10.1007/s11121-011-0210-0
- Fisher, W.W., Kelley, M.E., & Lomas, J.E. (2003). Visual aids and structured criteria for improving visual inspection and interpretation of single-case designs. *Journal of Applied Behavior Analysis*, 36(3), 387.
- Folkman, S., & Lazarus, R.S. (1988). Coping as a mediator of emotion. *Journal of Personality and Social Psychology*, 54(3), 466-475. doi: 10.1037/0022-3514.54.3.466
- Fombonne, E., Wostear, G., Cooper, V., Harrington, R., & Rutter, M. (2001). The Maudsley long-term follow-up of child and adolescent depression. *The British Journal of Psychiatry*, 179(3), 210-217. doi: 10.1192/bjp.179.3.210

- Forman, S., Olin, S. S., Hoagwood, K.E., Crowe, M., & Saka, N. (2009). Evidence-Based Interventions in Schools: Developers' Views of Implementation Barriers and Facilitators. *School Mental Health, 1*(1), 26-36. doi: 10.1007/s12310-008-9002-5
- Fox, M. (2003). Opening Pandora's Box: Evidence-based practice for educational psychologists. *Educational Psychology in Practice, 19*(2), 91-102. doi: 10.1080/02667360303233
- Fritz, C.O., Morris, P.E., & Richler, J.J. (2012). Effect size estimates: Current use, calculations, and interpretation. *Journal of Experimental Psychology: General, 141*(1), 2.
- Gage, N.L. (1989). The Paradigm Wars and Their Aftermath A "Historical" Sketch of Research on Teaching Since 1989. *Educational Researcher, 18*(7), 4-10. doi: 10.3102/0013189x018007004
- Garmezy, N. (1996). Reflections and commentary on risk, resilience and development. In R.J. Haggerty, L.R. Sherrod & N. Garmezy (Eds.), *Stress, Risk, and Resilience in Children and Adolescents: Processes, Mechanisms, and Interventions*. Cambridge: Cambridge University Press.
- Garnefski, N., Boon, S., & Kraaij, V. (2003). Relationships between cognitive strategies of adolescents and depressive symptomatology across different types of life event. *Journal of Youth and Adolescence, 32*(6), 401-408.
- Gilligan, R. (1997). Beyond permanence? - The importance of resilience in child placement practice and planning. *Adoption and Fostering, 21*, 12-20.
- Ginsburg, G.S., Kendall, P.C., Sakolsky, D., Compton, S.N., Piacentini, J., Albano, A.M., . . . March, J.S. (2011). Remission after acute treatment in children and adolescents with anxiety disorders: Findings from the CAMS. *Journal of Consulting and Clinical Psychology, 79*(6), 806-813. doi: 10.1037/a0025933
- Gough, D. (2004). Systematic Research Synthesis. In G. Thomas & R. Pring (Eds.), *Evidence Based Practice in Education*. Berkshire: OUP.
- Gough, D. (2007). Weight of Evidence: a framework for the appraisal of the quality and relevance of evidence. *Research Papers in Education, 22*(2), 213-228.
- Greden, John F. (2001). The burden of recurrent depression: causes, consequences, and future prospects. *Journal of Clinical Psychiatry, 62*, 5-9.
- Green, H., McGinnity, A., Meltzer, H., Ford, T., & Goodman, R. (2005). *Mental Health of Children and Young People in Great Britain 2004*. London: Office for National Statistics.
- Greenberg, M.T., Domitrovich, & Bumbarger, B. (2001). The Prevention of Mental Disorders in School-Aged Children: Current State of the Field. *Prevention and Treatment, 4*(1).
- Greene, J.C. (2008). Is Mixed Methods Social Inquiry a Distinctive Methodology? *Journal of Mixed Methods Research, 2*(1), 7-22. doi: 10.1177/1558689807309969
- Greene, J.C., Caracelli, V.J., & Graham, W.F. (1989). Toward a Conceptual Framework for Mixed-Method Evaluation Designs. *Educational Evaluation and Policy Analysis, 11*(3), 255-274. doi: 10.3102/01623737011003255
- Guba, E.G., & Lincoln, Y.S. (1994). Competing Paradigms in Qualitative Research. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research*. London: Sage.
- Hae-ra, Han. (2009). Measuring Anxiety in Children: A Methodological Review of the Literature. *Asian Nursing Research, Vol 3*(No. 2), 49-61.
- Han, S.S., & Weiss, B. (2005). Sustainability of teacher implementation of school-based mental health programs. *Journal of Abnormal Child Psychology, 33*(6), 665-679.
- Harbst, K.B., Ottenbacher, K.J., & Harris, S.R. (1991). Interrater reliability of therapists' judgments of graphed data. *Physical therapy, 71*(2), 107-115.
- Henderson, J.L., MacKay, S., & Peterson-Badali, M. (2006). Closing the Research-Practice Gap: Factors Affecting Adoption and Implementation of a Children's Mental Health

- Program. *Journal of Clinical Child & Adolescent Psychology*, 35(1), 2-12. doi: 10.1207/s15374424jccp3501_1
- Higgins, H.J. (2009). *A study exploring the influences of training on teaching assistants learning, behaviour and self efficacy*. (Doctor of Applied Educational Psychology), University of Nottingham, Nottingham.
- Hofmann, S.G., & Smits, J. A. J. (2008). Cognitive Behavioural Therapy for adult anxiety disorders: A meta-analysis of randomised placebo controlled trials. *J Clin Psychiatry*, 69(4), 621-632.
- Hojem, M.A., & Ottenbacher, K.J. (1988). Empirical investigation of visual-inspection versus trend-line analysis of single-subject data. *Physical therapy*, 68(6), 983-988.
- Horner, R.H., Carr, E.G., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The Use of Single-Subject Research to Identify Evidence-Based Practice in Special Education. *Exceptional Children*, 71(2), 165-179.
- Howe, K.R. (1988). Against the Quantitative-Qualitative Incompatibility Thesis or Dogmas Die Hard. *Educational Researcher*, 17(8), 10-16. doi: 10.3102/0013189x017008010
- Jacobson, N.S., Follette, W.C., & Revenstorf, D. (1984). Psychotherapy outcome research: Methods for reporting variability and evaluating clinical significance. *Behavior Therapy*, 15(4), 336-352. doi: [http://dx.doi.org/10.1016/S0005-7894\(84\)80002-7](http://dx.doi.org/10.1016/S0005-7894(84)80002-7)
- Jacobson, N.S., & Truax, P. (1991). Clinical significance: a statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, 59(1), 12.
- James, A.A.C.J., Soler, A., & Weatherall, R.R.W. (2005). Cognitive behavioural therapy for anxiety disorders in children and adolescents. *Cochrane Database of Systematic Reviews*, Issue 4. doi: 10.1002/14651858.CD004690.pub2
- Johnson, B., & Turner, L.A. (2003). Data Collection Strategies in Mixed Methods Research. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of Mixed Methods in Social and Behavioural Research*. London: SAGE.
- Jones, R.R., Weinrott, M.R., & Vaught, R.S. (1978). Effects of serial dependency on the agreement between visual and statistical inference. *Journal of Applied Behavior Analysis*, 11(2), 277.
- Kam, C.M., Greenberg, M.T., & Walls, C. (2003). Examining the Role of Implementation Quality in School-Based Prevention Using the PATHS Curriculum. *Prevention Science*, 4(1), 55-63. doi: 10.1023/a:1021786811186
- Kazdin, A.E. (1982). *Single-Case Research Designs - Methods for Clinical and Applied Settings*. Oxford: Oxford University Press.
- Kazdin, A.E. (1984). Statistical Analysis for Single Case Experimental Designs. In D. H. Barlow & M. Hersen (Eds.), *Single Case Experimental Designs strategies for studying behaviour change* (2nd ed.). Oxford: Pergamon Press.
- Kazdin, A.E., & Nock, M.K. (2003). Delineating mechanisms of change in child and adolescent therapy: Methodological issues and research recommendations. *Journal of Child Psychology and Psychiatry*, 44(8), 1116-1129.
- Kelly, J.A., Somlai, A.M., DiFrancesco, W.J., Otto-Salaj, L.L., McAuliffe, T.L., Hackl, K.L., . . . Rompa, D. (2000). Bridging the gap between the science and service of HIV prevention: transferring effective research-based HIV prevention interventions to community AIDS service providers. *American Journal of Public Health*, 90(7), 1082.
- Kendall, P.C., Kortlander, E., Chansky, T.E., & Brady, E.U. (1992). Comorbidity of anxiety and depression in youth: Treatment implications. *Journal of Consulting and Clinical Psychology*, 60(6), 869-880. doi: 10.1037/0022-006x.60.6.869
- Kovacs, M. (1985). The children's depression inventory. *Psychopharmacology Bulletin*, 21(4), 995-998.

- Kovacs, Maria, & Devlin, Bernie. (1998). Internalizing Disorders in Childhood. *Journal of Child Psychology and Psychiatry*, 39(1), 47-63. doi: 10.1111/1469-7610.00303
- Kratochwill, T. R., Hitchcock, J., Horner, R. H., Levin, J. R., Odom, S. L., Rindskopf, D. M., & Shadish, W. R. (2010). *Single-case designs technical documentation*. Retrieved from What Works Clearinghouse website: http://ies.ed.gov/ncee/wwc/pdf/wwc_scd.pdf.
- Kratochwill, T.R., & Levin, J.R. (2010). Enhancing the Scientific Credibility of Single-Case Intervention Research: Randomization to the rescue. *Psychological Methods*, 15(2), 124-144.
- Kratochwill, Thomas R., Hitchcock, John H., Horner, Robert H., Levin, Joel R., Odom, Samuel L., Rindskopf, David M., & Shadish, William R. (2012). Single-Case Intervention Research Design Standards. *Remedial and Special Education*. doi: 10.1177/0741932512452794
- Kuhn, T.S. (2012). *The structure of scientific revolutions (50th Anniversary Edition)* (4th ed.). London: The University of Chicago Press.
- Landis, J.R., & Koch, G.G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 159-174.
- Lazarus, R.S. (1993). From Psychological Stress to the Emotions: A History of Changing Outlooks. *Annual Review of Psychology*, 44, 1-21.
- Lazarus, R.S. (1999). Stress and emotion A New Synthesis. In Springer Publishing Company Inc (Ed.). New York.
- Lazarus, R.S., & Folkman, S. (1984). *Stress, Appraisal and Coping*. New York: Springer.
- Leadbetter, J. (2005). Activity theory as a conceptual framework and analytical tool within the practice of educational psychology: British Psychological Society.
- Leadbetter, J. (2008). Activity Theory and the Professional Practice of Educational Psychology. In B. Kelly, L. Woolfson & J. Boyle (Eds.), *Frameworks for Practice in Educational Psychology*. London: James Kingsley Publishers.
- Leadbetter, J., Daniels, H., Edwards, A., Martin, D., Middleton, D., Popova, A., . . . Brown, S. (2007). Professional learning within multi-agency children's services: researching into practice. *Educational Research*, 49(1), 83-98. doi: 10.1080/00131880701200815
- Legerstee, J. S., Huizink, A. C., Van Gastel, W., Liber, J. M., Treffers, P. D. A., Verhulst, F. C., & Utens, E. M. W. J. (2008). Maternal anxiety predicts favourable treatment outcomes in anxiety-disordered adolescents. *Acta Psychiatrica Scandinavica*, 117(4), 289-298. doi: 10.1111/j.1600-0447.2008.01161.x
- Legerstee, J.S., Tulen, J.H.M., Dierckx, B., Treffers, P.D.A., Verhulst, F.C., & Utens, E.M.W.J. (2010). CBT for childhood anxiety disorders: differential changes in selective attention between treatment responders and non-responders. *Journal of Child Psychology and Psychiatry*, 51(2), 162-172. doi: 10.1111/j.1469-7610.2009.02143.x
- Legerstee, J.S., Tulen, J.H.M., Kallen, V.L., Dieleman, G.C., Treffers, P.D.A., Verhulst, F.C., & Utens, E.M.W.J. (2009). Threat-Related Selective Attention Predicts Treatment Success in Childhood Anxiety Disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 48(2), 196-205.
- Liber, J. M., Widenfelt, B., Leeden, A., Goedhart, A., Utens, E., & Treffers, P. (2010). The Relation of Severity and Comorbidity to Treatment Outcome with Cognitive Behavioral Therapy for Childhood Anxiety Disorders. *Journal of Abnormal Child Psychology*, 38(5), 683-694. doi: 10.1007/s10802-010-9394-1
- Liber, J.M., McLeod, B.D., Van Widenfelt, B.M., Goedhart, A.W., van der Leeden, A.J. M., Utens, E., & Treffers, P. (2010). Examining the Relation Between the Therapeutic Alliance, Treatment Adherence, and Outcome of Cognitive Behavioral Therapy for Children With Anxiety Disorders. *Behavior Therapy*, 41(2), 172-186. doi: 10.1016/j.beth.2009.02.003

- Liber, J.M., van Widenfelt, B.M., Goedhart, A.W., Utens, E., van der Leeden, A. J. M., Markus, M.T., & Treffers, P. (2008). Parenting and Parental Anxiety and Depression as Predictors of Treatment Outcome for Childhood Anxiety Disorders: Has the Role of Fathers Been Underestimated? *Journal of Clinical Child & Adolescent Psychology*, 37(4), 747-758. doi: 10.1080/15374410802359692
- Liber, J.M., Van Widenfelt, B.M., Utens, E., Ferdinand, R., Van der Leeden, A.J. M., Van Gastel, W., & Treffers, P. (2008). No differences between group versus individual treatment of childhood anxiety disorders in a randomised clinical trial. *Journal of Child Psychology and Psychiatry*, 49(8), 886-893. doi: 10.1111/j.1469-7610.2008.01877.x
- Liddle, I., & MacMillan, S. (2010). Evaluating the FRIENDS programme in a Scottish Setting. *Educational Psychology in Practice*, 26(1), 53-67.
- Lincoln, Y.S., & Guba, E.G. (1985). *Naturalistic Inquiry*: SAGE Publications.
- Lock, S., & Barrett, P.M. (2003). A Longitudinal Study of Developmental Differences in Universal Preventive Intervention for Child Anxiety. *Behaviour Change*, 20(04), 183-199. doi: doi:10.1375/bech.20.4.183.29383
- Lowry-Webster, H.M., Barrett, P.M., & Dadds, M.R. (2001). A universal prevention trial of anxiety and depressive symptomatology in childhood: Preliminary data from an Australian study. *Behaviour Change*, 18(1), 36-50.
- Lowry-Webster, H.M., Barrett, P.M., & Lock, S. (2003). A universal prevention trial of anxiety symptomatology during childhood: results at a 1-year follow-up. *Behaviour Change*, 20(1), 25-43.
- Luthar, S.S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, 71(3), 543-562.
- March, J.S., Parker, J.D.A., Sullivan, K., Stallings, P., & Conners, C.K. (1997). The Multidimensional Anxiety Scale for Children (MASC): Factor Structure, Reliability, and Validity. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36(4), 554-565.
- Martinsen, K.D., Aalberg, M., Gere, M., & Neumer, S.P. (2010). Using a structured treatment, Friends for Life, in Norwegian outpatient clinics: results from a pilot study. *the Cognitive Behaviour Therapist*, 2(01), 10-19. doi: doi:10.1017/S1754470X08000160
- Masten, A.S. (2001). Ordinary Magic, Resilience Processes in Development. *American Psychologist*, 56(3), 227-138.
- Matyas, T.A., & Greenwood, K.M. (1990). Visual analysis of single-case time series: Effects of variability, serial dependence, and magnitude of intervention effects. *Journal of Applied Behavior Analysis*, 23(3), 341.
- McCrone, P., Dhanasiri, S., Patel, A., Knapp, M., & Lawton-Smith, S. (2008). Paying the Price: The Cost of Mental Health Care in England in 2026. London: King's Fund.
- McLeod, J. (2003). *An Introduction to Counselling* (3rd Edition ed.). Maidenhead: OUP.
- McLoone, J., Hudson, J.L., & Rapee, R.M. (2006). Treating anxiety disorders in a school setting. *Education and Treatment of Children*, 29, 219-242.
- McMurtry, C Meghan, Noel, Melanie, Chambers, Christine T, & McGrath, Patrick J. (2011). Children's fear during procedural pain: preliminary investigation of the Children's Fear Scale. *Health Psychology*, 30(6), 780.
- Merry, S., McDowell, H., Hetrick, S., Bir, J., & Muller, N. (2009). Psychological and / or educational interventions for the prevention of depression in children and adolescents.
- Mertens, D.M. (2010). *Research and evaluation in education and psychology: integrating diversity with quantitative, qualitative and mixed methods* (3rd ed.). London: Sage.

- Miller, A. (2008). Raising Educational Achievement - What can instructional psychology contribute? In N. Frederickson, A. Miller & T. Cline (Eds.), *Educational Psychology Topics in Applied Psychology*. London: Hodder Education.
- Miller, L.D., Laye-Gindhu, A., Liu, Y., March, J.S., Thordarson, D.S., & Garland, E.J. (2011a). Evaluation of a preventive intervention for child anxiety in two randomized attention-control school trials. *Behaviour Research and Therapy*, 49(5), 315-323. doi: 10.1016/j.brat.2011.02.006
- Miller, Lynn D., Laye-Gindhu, Aviva, Bennett, Joanna L., Liu, Yan, Gold, Stephenie, March, John S., . . . Waechtler, Vanessa E. (2011b). An Effectiveness Study of a Culturally Enriched School-Based CBT Anxiety Prevention Program. *Journal of Clinical Child & Adolescent Psychology*, 40(4), 618-629. doi: 10.1080/15374416.2011.581619
- Moran, P., Ghate, D., & van der Merwe, A. (2004). *What works in Parenting Support? A Review of the International Evidence*. Nottingham: DfES publications.
- Morgan, D.L. (2007). Paradigms Lost and Pragmatism Regained. *Journal of Mixed Methods Research*, 1(1), 48-76. doi: 10.1177/2345678906292462
- Moscovitch, David A, McCabe, Randi E, Antony, Martin M, Rocca, Laura, & Swinson, Richard P. (2008). Anger experience and expression across the anxiety disorders. *Depression and anxiety*, 25(2), 107-113.
- Mostert, J., & Loxton, H. (2008). Exploring the Effectiveness of the FRIENDS Program in Reducing Anxiety Symptoms among South African Children. *Behaviour Change*, 25(2), 85-96.
- Murberg, T.A., & Bru, E. (2005). The role of coping styles as predictors of depressive symptoms among adolescents: A prospective study. *Scandinavian Journal of Psychology*, 46(4), 385-393. doi: 10.1111/j.1467-9450.2005.00469.x
- Nauta, M.H. (2005). *Anxiety disorders in children and adolescents: Assessment, cognitive behavioural therapy, and predictors of treatment outcome*: University Library Groningen][Host].
- Nauta, M.H., Scholing, A., Rapee, R.M., Abbott, M., Spence, S.H., & Waters, A. (2004). A parent report measure of children's anxiety. *Behaviour Research and Therapy*, 42(7), 813-839.
- Neil, A.L., & Christensen, H. (2009). Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. *Clinical Psychology Review*, 29(3), 208-215. doi: 10.1016/j.cpr.2009.01.002
- Nesse, Randolph. (1999). Proximate and evolutionary studies of anxiety, stress and depression: synergy at the interface. *Neuroscience & Biobehavioral Reviews*, 23(7), 895-903.
- NICE. (2005). The treatment of depression in children and young people. London: National Institute for Clinical Excellence.
- Nottingham, University of. (2011-12). *Doctorate in Applied Educational Psychology - Course Handbook year two supplement*.
- Nourbakhsh, M.R., & Ottenbacher, K.J. (1994). The statistical analysis of single-subject data: a comparative examination. *Physical therapy*, 74(8), 768-776.
- Nugent, W.R. (2010). *Analyzing Single System Design Data*. Oxford: Oxford University Press.
- Nussbaumer, D. (2011). An overview of cultural historical activity theory (CHAT) use in classroom research 2000 to 2009. *Educational Review*, 64(1), 37-55. doi: 10.1080/00131911.2011.553947
- O'Connor, S., Carney, T., House, E., Ferguson, E., Caldwell, F., & O'Connor, R. (2010a). Revision of the Hospital Anxiety and Depression Scale (HADS) to Produce the Paediatric Index of Emotional Distress (PI-ED). *Patient Reported Outcomes Newsletter*(43), 2-4.

- O'Connor, S., Carney, T., House, E., Ferguson, E., & O'Connor, R. (2010b). *The Paediatric Index of Emotional Distress Manual*. London: GL Assessment Ltd.
- OFSTED. (2010). ***** school inspection report: Crown Copyright.
- Oland, L. (2012). *Targeted Mental Health in Schools Project 2012-2013*. Retrieved from www.bgfl.org/s4e
- Olive, M.L., & Smith, B.W. (2005). Effect size calculations and single subject designs. *Educational Psychology, 25*(2-3), 313-324. doi: 10.1080/0144341042000301238
- Ollendick, T.H., Seligman, L.D., Goza, A.B., Byrd, D.A., & Singh, K. (2003). Anxiety and depression in children and adolescents: a factor-analytic examination of the tripartite model. *Journal of Child and Family Studies, 12*(2), 157-170.
- Pahl, K.M., & Barrett, P.M. (2010). Preventing Anxiety and Promoting Social and Emotional Strength in Preschool Children: A Universal Evaluation of the Fun FRIENDS Program. *Advances in School Mental Health Promotion, 3*(3), 14-25. doi: 10.1080/1754730x.2010.9715683
- Parker, R.I., & Brossart, D.F. (2003). Evaluating single-case research data: A comparison of seven statistical methods. *Behavior Therapy, 34*(2), 189-211.
- Parker, R.I., Brossart, D.F., Vannest, K.J., Long, J.R., De-Alba, R.G., Baugh, F.G., & Sullivan, J.R. (2005). Effect Sizes in Single Case Research: How Large is Large? *School Psychology Review, 34*(1), 116-132.
- Parker, R.I., Vannest, K.J., & Davis, J.L. (2011). Effect Size in Single-Case Research: A Review of Nine Nonoverlap Techniques. *Behavior Modification, 35*(4), 303-322. doi: 10.1177/0145445511399147
- Paul, J. (2011). *Evaluatiing the Impact of a Universal FRIENDS for Life Programme on Emotional Distress and Academic Self Perceptions*. (Doctorate in Applied Educational Psychology), Nottingham.
- Pawson, R., & Tilley, N. (1997). *Realistic Evaluation*. London: Sage.
- Petticrew, M., & Roberts, H. (2006). *Systematic Reviews in the Social Sciences - a practical guide*. Oxford: Blackwell.
- PHRC, Pathways Health and Research Centre. (2012). Pathways Empowering people to be resilient for life, from <http://www.pathwayshrc.com.au/>
- Preziosa, Alessandra, Grassi, Alessandra, Gaggioli, Andrea, & Riva, Giuseppe. (2009). Therapeutic applications of the mobile phone. *British Journal of Guidance & Counselling, 37*(3), 313-325. doi: 10.1080/03069880902957031
- Pye, M., Kleve, L., & Hooper, B. (2011). Evaluation of the Targeted Mental Health in Schools (TaMHS)Programme.
- Rallis, S.F., & Rossman, G.B. (2003). Mixed Methods in Evaluation Contexts: A Pragmatic Framework. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of Mixed Methods in Social and Behavioral Research*. London: SAGE.
- Reynolds, C. R., & Richmond, B. O. (1978). What I Think and Feel: a revised measure of children's manifest anxiety. *Journal of Abnormal Child Psychology, 6*, 271-280.
- Riley, W. T., Treiber, F. A., & Woods, M. G. (1989). Anger and Hostility in Depression. *The Journal of Nervous and Mental Disease, 177*(11), 668-674.
- Robson, C. (2002). *Real World Research*. Oxford: Blackwell Publishing.
- Rohrbach, L.A., Grana, R., Sussman, S., & Valente, T.W. (2006). Type II Translation: Transporting Prevention Interventions From Research to Real-World Settings. *Evaluation & the Health Professions, 29*(3), 302-333. doi: 10.1177/0163278706290408
- Rose, H., Miller, L., & Martinez, Y. (2009). "FRIENDS for Life": The Results of a Resilience-Building, Anxiety-Prevention Program in a Canadian Elementary School. *Professional School Counseling, 12*(6), 400-407. doi: 10.5330/PSC.n.2010-12.400

- Roth, W., & Lee, Y.J. (2007). "Vygotsky's Neglected Legacy": Cultural-Historical Activity Theory. *Review of Educational Research*, 77, 186.
- Rowling, J. K. (1999). *Harry Potter and the Sorcerer's stone*. New York: Scholastic.
- Rubie-Davies, C.M., Blatchford, P., Webster, R., Koutsoubou, M., & Bassett, P. (2010). Enhancing learning? A comparison of teacher and teaching assistant interactions with pupils. *School Effectiveness and School Improvement*, 21(4), 429-449. doi: 10.1080/09243453.2010.512800
- Rutter, M. (1999). Resilience Concepts and findings: implications for family therapy. *Journal of Family Therapy*, 21, 119-144.
- Rutter, M. (2006). Implications of Resilience Concepts for Scientific Understanding. *Annals of the New York Academy of Sciences*, 1094(1), 1-12. doi: 10.1196/annals.1376.002
- Saavedra, L.M., Silverman, W.K., Morgan-Lopez, A.A., & Kurtines, W.M. (2010). Cognitive behavioural treatment for childhood anxiety disorders: long term effects on anxiety and secondary disorders in young adulthood. *Journal of Child Psychology and Psychiatry: long term effects on anxiety and secondary disorders in young adulthood*, 51(8), 924-934.
- Sale, J. E. M., Lohfeld, L. H., & Brazil, K. (2002). Revisiting the Quantitative-Qualitative Debate: Implications for Mixed-Methods Research. *Quality and Quantity*, 36(1), 43-53.
- Schoenfeld, N.A., & Mathur, S.R. (2009). Effects of Cognitive-Behavioural Intervention on the School Performance of Students With Emotional or Behavioural Disorders and Anxiety. *Behavioral Disorders*, 34(4), 184-195.
- Schwarzer, R., & Schwarzer, C. (1996). A Critical Survey of Coping Instruments. In Moshe Zeidner & N.S. Endler (Eds.), *Handbook of Coping: Theory, Research, Applications*: Wiley.
- Scruggs, T.E., Mastropieri, M.A. , & Regan, K.S. (2006). Statistical Analysis for Single Subject Research Designs,. In Margo A. Mastropieri Thomas E. Scruggs (Ed.), *Applications of Research Methodology (Advances in Learning and Behavioral Disabilities, Volume 19)* (pp. 33-53): Emerald Group Publishing Limited.
- Seiffge-Krenke, I. (2000). Causal links between stressful events, coping style, and adolescent symptomatology. *Journal of Adolescence*, 23(6), 675-691. doi: <http://dx.doi.org/10.1006/jado.2000.0352>
- Seligman, L.D., & Ollendick, T.H. (1998). Comorbidity of anxiety and depression in children and adolescents: An integrative review. *Clinical Child and Family Psychology Review*, 1(2), 125-144.
- Shaughnessy, J.J., Zechmeister, E.B., & Zechmeister, J.S. (2006). *Research Methods in Psychology* (7th ed.). London: McGraw-Hill International Edition.
- Sherman, L.W., Gottfredson, D.C., MacKenzie, D.L., Eck, J., Reuter, P., & Bushway, S.D. (1998). Preventing crime: What works, what doesn't, what's promising. [Monograph]. In National Institute of Justice (Ed.). Washington, DC: U.S. Department of Justice.
- Shortt, A.L., Barrett, P.M., & Fox, T.S. (2001). Evaluating the FRIENDS program: A cognitive behavioral group treatment for anxious children and their parents. *Journal of Clinical Child Psychology*, 30(4), 525-535.
- Shortt, A.L., & Spence, S.H. (2006). Risk and protective factors for depression in youth. *Behaviour Change*, 23(01), 1-30.
- Skinner, B. F. (1958). Reinforcement today. *American Psychologist*, 13, 94-99.
- Slavin, R. E. (1995). Best evidence synthesis: an intelligent alternative to meta-analysis. *Journal of Clinical Epidemiology*, 48(1), 9-18. doi: 10.1016/0895-4356(94)00097-a

- Smith, J.D. (2012). Single-Case Experimental Designs: A Systematic Review of Published Research and Current Standards. *Psychological Methods*, 17(4), 510-550. doi: 10.1037/a0029312
- Software, MedCalc. (2013). MedCalc for Windows. Ostend, Belgium. Retrieved from <http://www.medcalc.org/index.php>
- Solanas, A., Manolov, R., & Onghena, P. (2010). Estimating slope and level change in N= 1 designs. *Behavior Modification*, 34(3), 195-218.
- Spence, S. (1999). *Spence Children's Anxiety Scale* Brisbane: University of Queensland.
- Spence, S., Barrett, P. M., & Turner, C. M. (2003). Psychometric properties of the Spence Children's Anxiety Scale with young adolescents. *Anxiety Disorders*, 17, 605-625.
- Spence, S., Barrett, P.M., & Turner, C.M. (2003). Psychometric properties of the Spence Children's Anxiety Scale with young adolescents *Anxiety Disorders*, 17, 605-625.
- Spirito, A. (1996.). Commentary: Pitfalls in the Use of Brief Screening Measures of Coping. *Journal of Pediatric Psychology*, 21(4), 573-575.
- Spirito, A., Stark, L.J., & Williams, C. (1988). Development of a Brief Coping Checklist for Use with Pediatric Populations. *Journal of Pediatric Psychology*, 13(4), 555-574.
- Spirito, A., Stark, L.J., & Williams, C. (1998). Kidcope. In N.L. Frederickson & S. Dunsmuir (Eds.), *Measures of Children's Mental Health and Psychological Wellbeing: A Portfolio for Education and Health Professionals*. London: GL Assessment Ltd.
- Stallard, P. (2009). *Anxiety: Cognitive Behaviour Therapy With Children and Young People*: Routledge Chapman and Hall.
- Stallard, P. (2010). Mental health prevention in UK classrooms: The FRIENDS anxiety prevention programme. *Emotional and Behavioural Difficulties*, 15(1), 23-35.
- Stallard, P., Simpson, N., Anderson, S., & Goddard, M. (2008). The FRIENDS emotional health prevention programme: 12 month follow-up of a universal UK school based trial. *European Child and Adolescent Psychiatry*, 17, 283-289.
- Stallard, P., Simpson, N., Anderson, S., Hibbert, S., & Osborn, C. (2007). The FRIENDS Emotional Health Programme: Initial Findings from a School-Based Project. *Child and Adolescent Mental Health*, 12(1), 32-37.
- Stallard, P., Simpson, N., Carter, T., Osborn, C., & Bush, S. (2005). An evaluation of the FRIENDS programme: A cognitive behaviour therapy intervention to promote emotional resilience. *Archives of Disease in Childhood*, 90, 1016-1019.
- Stopa, J.E., Barrett, P.M., & Golingi, F. (2010). The Prevention of Childhood Anxiety in Socioeconomically Disadvantaged Communities: A Universal School-Based Trial. *Advances in School Mental Health Promotion*, 3(4), 5-24. doi: 10.1080/1754730x.2010.9715688
- Strauss, C.C., Last, C.G., Hersen, M., & Kazdin, A.E. (1988). Association between anxiety and depression in children and adolescents with anxiety disorders. *Journal of Abnormal Child Psychology*, 16(1), 57-68. doi: 10.1007/bf00910500
- Tashakkori, A., & Teddlie, C. (2010). Putting the Human back in "Human Research Methodology": The Researcher in Mixed Methods Research. *Journal of Mixed Methods Research*, 4(4), 271-277.
- Teddlie, C., & Tashakkori, A. (2003). Major Issues and Controversies in the use of mixed methods in the social and behavioural sciences. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of Mixed Methods in Social and Behavioral Research*. London: SAGE.
- Teddlie, C., & Tashakkori, A. (2009). *Foundations of Mixed Method Research: Integrating quantitative and qualitative approaches in the social and behavioural sciences*. London: Sage.
- Thaker, S., Steckler, A., Sánchez, V., Khatapoush, S., Rose, J., & Hallfors, D. (2008). Program characteristics and organizational factors affecting the implementation of a school-

- based indicated prevention program. *Health Education Research*, 23(2), 238-248. doi: 10.1093/her/cym025
- Thomas, G. (2011). *How to do your Case Study - a guide for students and researchers*. London: SAGE.
- Torgerson, C.J., & Torgerson, D.J. (2001). The Need for Randomised Controlled Trials in Educational Research. *British Journal of Educational Studies*, 49(3), 316-328. doi: 10.1111/1467-8527.t01-1-00178
- Tyrer, Peter. (2001). The case for cothymia: mixed anxiety and depression as a single diagnosis. *The British Journal of Psychiatry*, 179(3), 191-193.
- UCL, and Anna Freud Centre. (2011). *Me and My School: Findings from the National Evaluation of Targeted Mental Health in School 2008-2011*. Nottingham: DfE Retrieved from <https://www.education.gov.uk/publications/eOrderingDownload/DFE-RR177.pdf>.
- van der Leeden, A.J. M., van Widenfelt, B.M., van der Leeden, R., Liber, J.M., Utens, E.M. W. J., & Treffers, P.D. A. (2011). Stepped Care Cognitive Behavioural Therapy for Children with Anxiety Disorders: A New Treatment Approach. *Behavioural and Cognitive Psychotherapy*, 39(01), 55-75. doi: doi:10.1017/S1352465810000500
- Webster, R., Blatchford, P., Bassett, P., Brown, P., Martin, C., & Russell, A. (2011). The wider pedagogical role of teaching assistants. *School Leadership & Management*, 31(1), 3-20. doi: 10.1080/13632434.2010.540562
- Weems, C.F., & Stickle, R.T. (2005). Anxiety Disorders in Childhood: Casting a Nomological Net. *Clinical Child and Family Psychology Review*, 8(2), 107-134.
- Weich, S., & Lewis, G. (1998). Material standard of living, social class, and the prevalence of the common mental disorders in Great Britain. *Journal of Epidemiology and Community Health*, 52(1), 8-14.
- Westbrook, D., Kennerley, H., & Kirk, J. (2011). *An Introduction to Cognitive Behaviour Therapy Skills and Applications* (2nd ed.). London: Sage Publications.
- Wigelsworth, M., Humphrey, N., Kalambouka, A., & Lendrum, A. (2010). A review of key issues in the measurement of children's social and emotional skills. *Educational Psychology in Practice*, 26(2), 173-186. doi: 10.1080/02667361003768526
- Wise, E.A. (2004). Methods for analyzing psychotherapy outcomes: A review of clinical significance, reliable change, and recommendations for future directions. *Journal of Personality Assessment*, 82(1), 50-59.
- Wisniewski, J. J., Mulick, J. A ., Genshaft, J. L., & Coury, D. L. (1987). Test-retest reliability of the Revised Children's Manifest Anxiety Scale. *Perceptual and motor skills*, 65(1), 67-70.
- Woodward, L.J., & Fergusson, D.M. (2001). Life Course Outcomes of Young People With Anxiety Disorders in Adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(9), 1086-1093. doi: 10.1097/00004583-200109000-00018
- World Health Organisation, WHO. (2004). *Prevention of Mental Disorders - Effective Interventions and Policy Options*. Geneva: Prevention Research Centre of the Universiites of Nijmegen and Maastricht.
- Yin, R.K. (2009). *Case Study Research Design and Methods* (4th ed.). London: Sage.
- Zigmond, A.S., & Snaith, R.P. (1983). The hospital anxiety and depression scale. *Acta Psychiatrica Scandinavica*, 67, 310-370.
- Zinbarg, R.E., Craske, M.G., & Barlow, D.H. (2006). *Mastery of Your Anxiety and Worry : Therapist Guide*. Cary, NC, USA: Oxford University Press.

Secondary References

Haring, N.G. and Eaton M.D. (2008) cited by Miller, A. (2008). Raising Educational Achievement - What can instructional psychology contribute? In N. Frederickson, A. Miller & T. Cline (Eds.), *Educational Psychology Topics in Applied Psychology*. London: Hodder Education.

Roethlisberger, F.L. and Dixon W.T. (1939) cited by Robson, C. (2002). *Real World Research*. Oxford: Blackwell Publishing.

Tashakkori, A. and Cresswell, J.W. (2007) cited by Mertens, D.M. (2010). *Research and evaluation in education and psychology: integrating diversity with quantitative, qualitative and mixed methods* (3rd ed.). London: Sage.

Appendices

7 Appendices

7.1 Appendix 1– Systematic Review- Search strategy, inclusion criteria and excluded studies

Systematic Review Search Strategy

Sources of papers

- Pathways Health and Research Centre website (www.pathwayshrc.com.au).

The website included abstracts and links to 47 research and review documents published within the last 15 years.

- UNLOC; Psych Info, ERIC, ASSISA (Applied Social Science Index and Abstracts) and Web of Science. A number of search terms were employed

SEARCH TERM	NUMBER OF HITS
'Friends for life'	2185
'Friends for life' and 'anxiety'	159
'Friends for life' and 'resilience'	40
'Friends for life' and 'evaluation'	193
'Friends for life' and 'Cognitive Behavioural Therapy'	27
'Cognitive Behavioural Therapy' and 'school based intervention'	68

- The titles were read and where the focus of the paper was ambiguous the abstract was read. Papers not relevant to the study and duplications were discarded. This process identified 8 papers which had not been included on the Pathways website
- Google Scholar using the following search terms; 'Friends for life' in the exact words used and 'anxiety prevention' in all words. Results were limited to those papers published after 1999.
This identified 224 publications. The titles were read and where these were ambiguous the abstracts were read for relevance. This method identified a further 7 papers not identified by other methods.
- This gave a total of 62 papers.

- The following inclusion criteria was applied

Inclusion Criteria	Reason for exclusion and references
The studies had to report evaluative research into the efficacy of the programme	Some studies were rejected for seeking to understand features of the context which influence response to the programme e.g., maternal anxiety (Legerstee, Huizink, Van Gastel, Liber, Treffers, Verhulst, & Utens, 2008), parental anxiety and depression (Liber, van Widenfelt, Goedhart, Utens, van der Leeden, Markus, & Treffers, 2008) therapeutic alliance (Liber, McLeod, Van Widenfelt, Goedhart, van der Leeden, Utens, & Treffers, 2010) and the severity and comorbidity of problems (Liber, Widenfelt, Leeden, Goedhart, Utens, & Treffers, 2010). Review papers were excluded.
The research had to focus upon measurable outcomes for the child.	Studies reporting other measures, such social acceptability were excluded (Barrett, Shortt, Fox, & Westcombe, 2001). Studies which looked for additional factors which may influence or predict the success of the programme were also excluded e.g. research into selective attention (Legerstee, Tulen, Dierckx, Treffers, Verhulst, & Utens, 2010; Legerstee, Tulen, Kallen, Dieleman, Treffers, Verhulst, & Utens, 2009)
The study had to include pre and post measures.	Papers which gave only outcome results or evaluative comments from users, often with no methodology regarding their selection and representativeness, were excluded.
The target population had to be similar to the current setting	Studies were excluded if they focused upon target populations which were felt to be unrelated to the general situation of children in the researcher's local authority. This included Yugoslavian refugees (Barrett, Moore, & Sonderegger, 2000), non-English speaking children and adolescents (Barrett, Sonderegger, & Sonderegger, 2001), migrants to Australia (Barrett, Sonderegger, & Xenos, 2003), Youths exposed to community violence (Cooley-Strickland, Griffin, Darney, Otte, & Ko, 2011; Cooley, Boyd, & Grados, 2004) and Aboriginal children (Miller, Laye-Gindhu, Bennett, Liu, Gold, March, Olson, & Waechtler, 2011b).
The intervention was delivered in a school setting	Studies of clinical settings were excluded (Barrett, Duffy, Dadds, & Rapee, 2001; Farrell, Barret, & Claassens, 2005; Liber, Van Widenfelt, Utens, Ferdinand, Van der Leeden, Van Gastel, & Treffers, 2008; Martinsen, Aalberg, Gere, & Neumer, 2010; Shortt et al., 2001; van der Leeden, van Widenfelt, van der Leeden, Liber, Utens, & Treffers, 2011)

7.2 Appendix 2: Systematic Review of FRIENDS and references

See attached CD Rom

7.3 Appendix 3: Ethical Committee Clearance Letter

AS/hcf
Ref: 168



The University of
Nottingham

UNITED KINGDOM • CHINA • MALAYSIA

+44 (0)115 951 5306

Wednesday, January 25, 2012

School of Psychology

University Park
Nottingham
NG7 2RD

t: +44 (0)115 951 5361
f: +44 (0)115 951 5324

Head of School :

Professor Paul V McGraw
Allen Standen Chair in Visual Neuroscience

Dear Sarah Green,

Ethics Committee Review

Thank you for submitting an account of your proposed research 'Evaluating the impact of a teacher delivered, small group, CBT program on anxiety and coping strategies'.

That research has now been reviewed, to the extent that it is described in your submission, we are pleased to tell you it has met with the Committee's approval.

However:

Please note the following comments from our reviewers;

- 1. Main concern was lack of a full parental consent form . Please include this as well as the child consent. Other concerns; please include full contact details on all information sheets in order that participants have an opportunity to ask questions or request further information. The participant information sheet ends abruptly, please insert paragraph thanking participant for reading this information and inserting contact details, as already mentioned. The acronym CBT should be explained.**
- 2. Contact details of researcher and supervisor (email addresses, phone numbers) should be included on all information sheets.**

Final responsibility for ethical conduct of your research rests with you or your supervisor. The Codes of Practice setting out these responsibilities have been published by the British Psychological Society and the University Research Ethics Committee. If you have any concerns whatever during the conduct of your research then you should consult those Codes of Practice.

Independently of the Ethics Committee procedures, supervisors also have responsibilities for the risk assessment of projects as detailed in the safety pages of the University web site. Ethics Committee approval does not alter, replace, or remove those responsibilities, nor does it certify that they have been met.

Yours sincerely

Dr Alan Sunderland
Chair, Ethics Committee

7.4 Appendix 4 – Initial Contact Letter for Schools

Contact Details Removed

Dear xxxx

I am a trainee Educational Psychologist undertaking my work placement in XXX whilst studying at Nottingham University. For my thesis I am undertaking an evaluation of the FRIENDS intervention which is currently being introduced in (name of city) through the Targeted Mental Health in Schools Project (TAMHS). The name of your school had been passed to me by (Name of EP) and I understand that two members of staff are shortly to receive training in the programme before running it with a group of students at your school.

My research involves evaluating the impact of the programme on both the levels of anxiety and the coping skills of the students participating. This will involve me collecting some baseline data from the students prior to beginning the programme and then monitoring students on a weekly basis during the programme.

I hope that you are interested in being involved with my evaluation which would also fulfil much of your commitment to TAMHS regarding programme evaluation. Would it be possible to arrange a time to talk to you either in school or by phone to discuss this project in more detail?

I look forward to hearing from you.

Sarah L Green

Trainee Educational Psychologist

7.5 Appendix 5 - Information presented to schools outlining the research

An evaluation on the FRIENDS for life programme

Information for Schools

Sarah Green

Trainee Educational Psychologist

University of Nottingham

On Placement

Contact Details have been removed

AIMS

The aim of this study is to evaluate the success of the FRIENDS for life intervention as implemented by TAMHS.

The outcomes measured will be the **levels of anxiety** experienced and the **coping strategies** used by the young people.

I am also aiming to describe the way in which the intervention is implemented in school and gain staff views on its strengths and weaknesses.

METHOD

This evaluation will monitor the young people before, during and after the intervention using a case study time series approach.

School **staff** involved will be asked to participate in an **interview before and after** the intervention to explore their aims for the young people and their experience of the programme. They will also be asked to complete a **weekly diary** noting how the FRIENDS for life session went and any successes or difficulties encountered.

BEFORE THE INTERVENTION

Before the intervention begins **consent for participation** will be agreed. Measures will be taken of their **levels of anxiety** and **coping skills** (SCAS, PI-ED and Kidcope)
Their **parents** will also be asked to complete the SCAS rating scale.

The young people receiving the intervention will need to **meet with me weekly** for 30 minutes to complete the weekly measures (Kidcope and PI-ED) for at least 4 weeks prior to beginning the FRIENDS for life intervention.

DURING THE INTERVENTION

During the intervention the young people will **attend the FRIENDS for LIFE** programme.

In addition they will need 30 minutes weekly to complete the **weekly measures** (Kidcope and PI-ED) with me or a member of school staff (to be agreed).

POST INTERVENTION

After the intervention **measures** will be taken of the young people's **levels of anxiety and coping skills** (SCAS, PI-ED and Kidcope)

Their parents will also be asked to complete the SCAS rating scale.

The school and participants will receive a summary of the findings.

School Commitment

- A weekly half hour meeting with the young people involved for at least 16 weeks.
- Implementation of the FRIENDS for life programme.
- Staff participation in two interviews.
- Staff commitment to keep a weekly diary during the FRIENDS for life programme.

7.6 Appendix 6 - Staff Consent Information and form

Evaluating the impact, on anxiety and coping strategies, of a teacher delivered, small group, CBT program

Researcher Sarah Green Tel. XXXXXX

Supervised by Dr Sarah Atkinson, University of Nottingham Tel .
XXXXXXXXXX

Staff Participant Information

As part of my Doctoral degree in Applied Educational Psychology I am conducting an evaluation of a programme being run in your school called 'FRIENDS for life' which aims to help children develop skills and strategies to manage situations which make them feel anxious.

During the study, you will be asked questions about the experience of delivering the programme.

The information collected will be anonymised and stored securely. It will be used as part of my doctoral thesis and as such will be available to the public. All names and identifying data will be changed.

All information will be treated as confidential with the exception of any information which suggests that an individual is at risk of harm in which case this information will be shared with the member of school staff with responsibility for safeguarding.

You have the right to withdraw from the study at any point, including withdrawing information which has already been collected. You do not need to give a reason for this decision.

Thank you for taking the time to read this. Please contact me if you have any additional questions.

Staff consent form

Evaluating the impact, on anxiety and coping strategies, of a teacher delivered, small group, CBT program

*Investigators: Sarah Green supervised by Dr Sarah Atkinson
School of Psychology, University of Nottingham*

Please read the following questions and circle your answer.

- Have you read and understood the participant information sheet
YES / NO
- Have you had the opportunity to ask questions and discuss the study
YES / NO
- Have all the questions been answered satisfactorily
YES / NO
- Have you received enough information about the study
YES / NO
- Do you understand that you are free to withdraw from the study:
 - at any time YES / NO
 - without having to give a reason YES / NO
- Do you agree to take part in the study
YES / NO

“This study has been explained to me to my satisfaction, and I agree to take part. I understand that I am free to withdraw at any time.”

Signature of the Participant:

Date:

Name (in block capitals)

I have explained the study to the above participant and he/she has agreed to take part.

Signature of researcher

Date

7.7 Appendix 7 - Parent Information and Consent

Contact details have been removed

Dear Parent / Guardian,

Your child has been chosen to participate in a programme at their school called 'FRIENDS for life'. This programme aims to help children develop skills and strategies to manage stressful or worrying situations and has been recommended by the World Health Organisation (WHO). For more information please see www.friendsinfo.net/.

I am a student at the University of Nottingham. As part of my Doctoral degree in Applied Educational Psychology I am conducting an evaluation of the FRIENDS for life programme. I am writing to request permission for your child to be involved in this study. During the study your child will be asked to complete a weekly scale which measures how they are feeling and how they would deal with a hypothetical situation. This will take place in school and take around 15-30 minutes.

Parents and Guardians will also be asked to complete a questionnaire about their child's anxiety levels at the beginning and end of the study. The whole study will last around 18 weeks.

The information collected will be anonymised and stored securely. The information will be used, anonymously, as part of my doctoral thesis which will be available to the public.

All information will be treated as confidential with the exception of any information which suggests that your child or another person are at risk of harm in which case this information will be shared with the member of school staff with responsibility for safeguarding.

If at any time your child appears distressed or unhappy during the data collection, it will be discontinued immediately and your child will be

supported by staff at his/her school. You have the right to withdraw your child from the study at any point, even after signing the consent form. This includes withdrawing information which has already been collected. You do not need to give a reason for this decision.

Thank you for taking the time to read this. If you have any further questions please contact me or my supervisor using the details below.

Please complete and return the consent form to indicate whether or not you are happy for your child to participate in the evaluation.

If you are happy for your child to take part in the study please complete the enclosed parent/guardian questionnaire which is designed to measure children's anxiety and worries.

Yours sincerely

Sarah Green

Trainee Educational Psychologist on placement at XXX Council Tel
XXXXXX

Supervised by Dr Sarah Atkinson, University of Nottingham Tel XXXXXX

CONSENT FORM

FRIENDS for life evaluation

Please return to your child's school marked for the attention of

Mrs S Green, Trainee Educational Psychologist – FRIENDS for life project.

I parent / guardian of

.....Form

Give permission / do not give permission (please delete) for my child's data to be included in an evaluation of the FRIENDS for life program.

Signed Date

.....

Name (printed)

I also enclose a completed copy of the SPENCE anxiety scale.

7.8 Appendix 8 - Child Information and Consent Form

Child consent form

Evaluating the impact, on anxiety and coping strategies, of a teacher delivered, small group, CBT program

Investigators: Sarah Green supervised by Dr Sarah Atkinson
School of Psychology, University of Nottingham Tel . XXXXXXXXX

Information for Participants

This study is looking at young people's understanding of anxiety and worry and how young people cope with problems which worry them and make them feel anxious. During the study you will be asked to complete a weekly questionnaire, for 16 weeks, of how you are feeling and how you have dealt with any worries you have. You will also be asked some questions about anxiety at the beginning and end of the study.

The information collected will be anonymous and stored securely. All of your answers are confidential and will not be shared with anybody unless it is felt that you, or somebody else, are at risk from harm.

The information gathered will be used as part of my doctoral thesis and as such will be available to the public. All names and identifying data will be changed.

You have the right to withdraw from the study at any point, including withdrawing information which has already been collected. You do not need to give a reason for this decision.

Thank you very much for reading this information. If you need any further information I can be contacted at

Contact Information has been removed

Please read the following questions and circle your answer.

The participant should complete the whole of this sheet himself/herself.
Please cross out as necessary

☐ Have you read and understood the participant information sheet?

YES / NO

☐ Have you had the opportunity to ask questions and discuss the study?

YES / NO

☐ Have all the questions been answered satisfactorily?

YES / NO

☐ Have you received enough information about the study?

YES / NO

☐ Do you understand that you are free to withdraw from the study:

at any time? YES / NO

without having to give a reason? YES / NO

☐ Do you agree to take part in the study?

YES / NO

“This study has been explained to me to my satisfaction, and I agree to take part. I understand that I am free to withdraw at any time.”

Signature of the Participant:

Date:

Name (in block capitals)

I have explained the study to the above participant and he/she has agreed to take part

Signature of researcher

Date

Thank you very much for agreeing to take part in this
study

7.9 Appendix 9 - Timeline of Research Project Implementation

December 2011	Apply for Ethical Consent Develop Kidcope measure modifications
January 2012	Identify participant schools
February 2012	Identify participant children Gain consent Administer pre measures parent and child Begin baseline monitoring after February half term
March 2012	Baseline Monitoring Intervention Phase begins Intervention monitoring
April 2012	Intervention phase and monitoring continue
May 2012	Intervention phase and monitoring continue
June 2012	Intervention phase and monitoring continue
July 2012	Intervention phase and monitoring continue
September 2012	Interview with Learning Mentors
August 2012 May 2013	Data analysis and write up.
October 2012	Feedback to school, parents and participants
February 2013	Feedback to the TAMHS group

7.10 Appendix 10 - Spence Children Anxiety Scale (Spence, 1999) – Child Version

SPENCE CHILDREN'S ANXIETY SCALE

Your Name: Date:

PLEASE PUT A CIRCLE AROUND THE WORD THAT SHOWS HOW OFTEN EACH OF THESE THINGS HAPPEN TO YOU. THERE ARE NO RIGHT OR WRONG ANSWERS.

1. I worry about things.....	Never	Sometimes	Often	Always
2. I am scared of the dark.....	Never	Sometimes	Often	Always
3. When I have a problem, I get a funny feeling in my stomach.....	Never	Sometimes	Often	Always
4. I feel afraid.....	Never	Sometimes	Often	Always
5. I would feel afraid of being on my own at home.....	Never	Sometimes	Often	Always
6. I feel scared when I have to take a test.....	Never	Sometimes	Often	Always
7. I feel afraid if I have to use public toilets or bathrooms.....	Never	Sometimes	Often	Always
8. I worry about being away from my parents.....	Never	Sometimes	Often	Always
9. I feel afraid that I will make a fool of myself in front of people.....	Never	Sometimes	Often	Always
10. I worry that I will do badly at my school work.....	Never	Sometimes	Often	Always
11. I am popular amongst other kids my own age.....	Never	Sometimes	Often	Always
12. I worry that something awful will happen to someone in my family.....	Never	Sometimes	Often	Always
13. I suddenly feel as if I can't breathe when there is no reason for this.....	Never	Sometimes	Often	Always
14. I have to keep checking that I have done things right (like the switch is off, or the door is locked).....	Never	Sometimes	Often	Always
15. I feel scared if I have to sleep on my own.....	Never	Sometimes	Often	Always
16. I have trouble going to school in the mornings because I feel nervous or afraid.....	Never	Sometimes	Often	Always
17. I am good at sports.....	Never	Sometimes	Often	Always
18. I am scared of dogs.....	Never	Sometimes	Often	Always
19. I can't seem to get bad or silly thoughts out of my head.....	Never	Sometimes	Often	Always
20. When I have a problem, my heart beats really fast.....	Never	Sometimes	Often	Always
21. I suddenly start to tremble or shake when there is no reason for this...	Never	Sometimes	Often	Always
22. I worry that something bad will happen to me.....	Never	Sometimes	Often	Always
23. I am scared of going to the doctors or dentists.....	Never	Sometimes	Often	Always
24. When I have a problem, I feel shaky.....	Never	Sometimes	Often	Always
25. I am scared of being in high places or lifts (elevators).....	Never	Sometimes	Often	Always

26.	I am a good person.....	Never	Sometimes	Often	Always
27.	I have to think of special thoughts to stop bad things from happening (like numbers or words).....	Never	Sometimes	Often	Always
28.	I feel scared if I have to travel in the car, or on a Bus or a train.....	Never	Sometimes	Often	Always
29.	I worry what other people think of me.....	Never	Sometimes	Often	Always
30.	I am afraid of being in crowded places (like shopping centres, the movies, buses, busy playgrounds).....	Never	Sometimes	Often	Always
31.	I feel happy.....	Never	Sometimes	Often	Always
32.	All of a sudden I feel really scared for no reason at all.....	Never	Sometimes	Often	Always
33.	I am scared of insects or spiders.....	Never	Sometimes	Often	Always
34.	I suddenly become dizzy or faint when there is no reason for this.....	Never	Sometimes	Often	Always
35.	I feel afraid if I have to talk in front of my class.....	Never	Sometimes	Often	Always
36.	My heart suddenly starts to beat too quickly for no reason.....	Never	Sometimes	Often	Always
37.	I worry that I will suddenly get a scared feeling when there is nothing to be afraid of.....	Never	Sometimes	Often	Always
38.	I like myself.....	Never	Sometimes	Often	Always
39.	I am afraid of being in small closed places, like tunnels or small rooms.	Never	Sometimes	Often	Always
40.	I have to do some things over and over again (like washing my hands, cleaning or putting things in a certain order).....	Never	Sometimes	Often	Always
41.	I get bothered by bad or silly thoughts or pictures in my mind.....	Never	Sometimes	Often	Always
42.	I have to do some things in just the right way to stop bad things happening.....	Never	Sometimes	Often	Always
43.	I am proud of my school work.....	Never	Sometimes	Often	Always
44.	I would feel scared if I had to stay away from home overnight.....	Never	Sometimes	Often	Always
45.	Is there something else that you are really afraid of?.....	YES	NO		
Please write down what it is _____					

How often are you afraid of this thing?.....		Never	Sometimes	Often	Always

© 1994 Susan H. Spence

7.11 Appendix 11 - Spence Children Anxiety Scale (Spence, 1999) – Parent Version

SPENCE CHILDREN'S ANXIETY SCALE (Parent Report)

Your Name: Date:

Your Child's Name:

BELOW IS A LIST OF ITEMS THAT DESCRIBE CHILDREN. FOR EACH ITEM PLEASE CIRCLE THE RESPONSE THAT BEST DESCRIBES YOUR CHILD. PLEASE ANSWER ALL THE ITEMS.

1.	My child worries about things.....	Never	Sometimes	Often	Always
2.	My child is scared of the dark.....	Never	Sometimes	Often	Always
3.	When my child has a problem, s(he) complains of having a funny feeling in his / her stomach	Never	Sometimes	Often	Always
4.	My child complains of feeling afraid.....	Never	Sometimes	Often	Always
5.	My child would feel afraid of being on his/her own at home.....	Never	Sometimes	Often	Always
6.	My child is scared when s(he) has to take a test.....	Never	Sometimes	Often	Always
7.	My child is afraid when (s)he has to use public toilets or bathrooms.....	Never	Sometimes	Often	Always
8.	My child worries about being away from us / me.....	Never	Sometimes	Often	Always
9.	My child feels afraid that (s)he will make a fool of him/herself in front of people.....	Never	Sometimes	Often	Always
10.	My child worries that (s)he will do badly at school.....	Never	Sometimes	Often	Always
11.	My child worries that something awful will happen to someone in our family.....	Never	Sometimes	Often	Always
12.	My child complains of suddenly feeling as if (s)he can't breathe when there is no reason for this.....	Never	Sometimes	Often	Always
13.	My child has to keep checking that (s)he has done things right (like the switch is off, or the door is locked).....	Never	Sometimes	Often	Always
14.	My child is scared if (s)he has to sleep on his/her own.....	Never	Sometimes	Often	Always
15.	My child has trouble going to school in the mornings because (s)he feels nervous or afraid.....	Never	Sometimes	Often	Always
16.	My child is scared of dogs	Never	Sometimes	Often	Always
17.	My child can't seem to get bad or silly thoughts out of his / her head.....	Never	Sometimes	Often	Always
18.	When my child has a problem, s(he) complains of his/her heart beating really fast.....	Never	Sometimes	Often	Always

19.	My child suddenly starts to tremble or shake when there is no reason for this.....	Never	Sometimes	Often	Always
20.	My child worries that something bad will happen to him/her.....	Never	Sometimes	Often	Always
21.	My child is scared of going to the doctor or dentist	Never	Sometimes	Often	Always
22.	When my child has a problem, (s)he feels shaky.....	Never	Sometimes	Often	Always
23.	My child is scared of heights (eg. being at the top of a cliff).....	Never	Sometimes	Often	Always
24.	My child has to think special thoughts (like numbers or words) to stop bad things from happening.....	Never	Sometimes	Often	Always
25.	My child feels scared if (s)he has to travel in the car, or on a bus or train	Never	Sometimes	Often	Always
26.	My child worries what other people think of him/her.....	Never	Sometimes	Often	Always
27.	My child is afraid of being in crowded places (like shopping centres, the movies, buses, busy playgrounds).....	Never	Sometimes	Often	Always
28.	All of a sudden my child feels really scared for no reason at all.....	Never	Sometimes	Often	Always
29.	My child is scared of insects or spiders.....	Never	Sometimes	Often	Always
30.	My child complains of suddenly becoming dizzy or faint when there is no reason for this.....	Never	Sometimes	Often	Always
31.	My child feels afraid when (s)he has to talk in front of the class.....	Never	Sometimes	Often	Always
32.	My child's complains of his / her heart suddenly starting to beat too quickly for no reason	Never	Sometimes	Often	Always
33.	My child worries that (s)he will suddenly get a scared feeling when there is nothing to be afraid of.....	Never	Sometimes	Often	Always
34.	My child is afraid of being in small closed places, like tunnels or small rooms.....	Never	Sometimes	Often	Always
35.	My child has to do some things over and over again (like washing his / her hands, cleaning or putting things in a certain order).....	Never	Sometimes	Often	Always
36.	My child gets bothered by bad or silly thoughts or pictures in his/her head	Never	Sometimes	Often	Always
37.	My child has to do certain things in just the right way to stop bad things from happening	Never	Sometimes	Often	Always
38.	My child would feel scared if (s)he had to stay away from home overnight.....	Never	Sometimes	Often	Always
39.	Is there anything else that your child is really afraid of?	YES	NO		
	Please write down what it is, and fill out how often (s)he is afraid of this thing:	Never	Sometimes	Often	Always
	Never	Sometimes	Often	Always
	Never	Sometimes	Often	Always

7.12 Appendix 12 - Sample Questions from the PI ED (O'Connor et al., 2010b)

PI-ED



Feelings are really important.

Your answers to the sentences over the page will help us understand how you feel.

Please read each of the sentences and put a tick (✓) beside the answer that describes you best.

Think about how you have been feeling over the last week (including today) when you read each sentence.

There are no right or wrong answers but it is important for you to let us know how you feel.

The sentence below is an example. Please put a tick in the box beside the answer that best describes you.

I like to play sports:

<input type="checkbox"/>	Always
<input type="checkbox"/>	A lot of the time
<input type="checkbox"/>	Sometimes
<input type="checkbox"/>	Not at all

Now turn over the page.

PI-ED

 **GL**
assessment
the measure of potential

FOLD HERE

FOLD HERE

Name: _____ Age: _____
Date: _____ Please tick: Male ☐ Female ☐

Remember to tick (☒) the box that describes you best over the last week (including today).

1 I feel shaky or 'wound up':

☐ Always
☐ A lot of the time
☐ Sometimes
☐ Not at all

8 I feel restless / fidgety as if I have to be on the move:

☐ Always
☐ A lot of the time
☐ Sometimes
☐ Not at all

2 I get a sort of frightened feeling as if something bad is about to happen:

☐ Always
☐ A lot of the time
☐ Sometimes
☐ Not at all

9

10

11

12 I feel good about myself:

☐ Always
☐ A lot of the time
☐ Sometimes
☐ Not at all

13 I get panicky:

☐ Always
☐ A lot of the time
☐ Sometimes
☐ Not at all

7 I get a sort of frightened feeling like 'butterflies' in my tummy:

☐ Always
☐ A lot of the time
☐ Sometimes
☐ Not at all

14 I am lonely:

☐ Always
☐ A lot of the time
☐ Sometimes
☐ Not at all

Total

3
2
1
0

3
2
1
0

3
2
1
0

0
1
2
3

0
1
2
3

3
2
1
0

3
2
1
0

3
2
1
0

0
1
2
3

3
2
1
0

3
2
1
0

0
1
2
3

3
2
1
0

3
2
1
0

7.13 Appendix 13 - KIDCOPE (Spirito et al., 1998) and vignettes

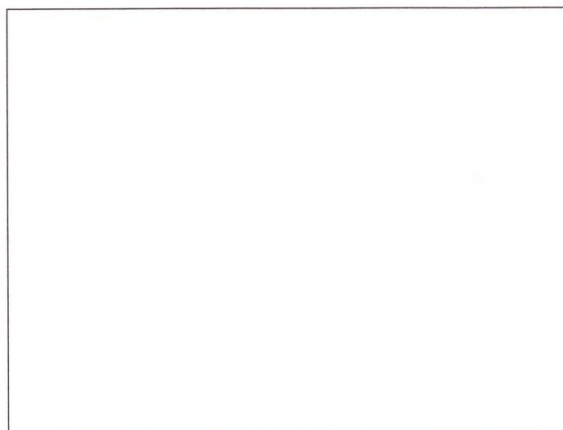
Adapted Kidcope scale

Simple Version

Participant number Date

Administered by

I am trying to find out how young people deal with different problems and stresses. The passage below describes a real problem that a young person has faced. Read the problem and imagine you were in that situation. Please then answer the questions that follow as honestly as you can. There are no right or wrong answers – I am just trying to understand what you would do.



How you would feel?	Not at all	A little	Somewhat	A lot	Very Much
Would that situation make you feel nervous or anxious?	0	1	2	3	4
Would it make you feel sad or unhappy?	0	1	2	3	4
Would it make you feel cross or angry?	0	1	2	3	4
Is there something you could do about the situation?				Yes	No
Is this situation one which you would have to accept or get used to?				Yes	No
Is this situation one that you needed to know more about before you could act?				Yes	No
Is this situation one in which you had to hold yourself back from doing what you wanted to?				Yes	No

Instructions : Please read each item and **circle a phrase** (or phrases) that applies (if any) See **Example** - row X. Answer **both** questions to the right of each item by circling the **best** answer.

		How often did you do this?				How much did it help?				
		Not at all	Some-times	A lot of the time	Almost all the time	Not at all	A little	Some-what	Pretty much	Very much
X	Example I would choose 50/50, ask the audience or phone a friend.	0	1	2	3	0	1	2	3	4
1	I would think about something else; try to forget it and/or go and do something like watch the telly, read or play games to get it out of my mind.	0	1	2	3	0	1	2	3	4
2	I would stay away from people: keep my feelings to myself, and handle it on my own.	0	1	2	3	0	1	2	3	4
3	I would try to see the positive and /or concentrate on something good which could come out of it.	0	1	2	3	0	1	2	3	4
4	I would realise that I had brought the problem on myself and blame myself for causing it.	0	1	2	3	0	1	2	3	4
5	I would realise that someone else had caused the problem and blame them for making me go through this.	0	1	2	3	0	1	2	3	4
6	I would think of ways to solve the problem: talk to others to get more facts and information about the problem and/or try to solve the problem.	0	1	2	3	0	1	2	3	4
7a	I would talk about how I was feeling: shout, scream or hit something.	0	1	2	3	0	1	2	3	4
7b	I would try to calm down by talking to myself, going for a walk and/or I would just relax	0	1	2	3	0	1	2	3	4
8	I would keep thinking and wishing that this had never happened and/or that I could change what had happened	0	1	2	3	0	1	2	3	4
9	I would turn to family, other adults or friends to make me feel better.	0	1	2	3	0	1	2	3	4
10	I would just accept the problem because I know that I couldn't do anything about it	0	1	2	3	0	1	2	3	4

Vignette 1

Loneliness

I feel horrible. No one likes me. My best friend moved away a year ago and we used to email each other every day right after he/she moved away. But now he/she hasn't emailed me for a month and he/she never replies. Everyone at school probably thinks I'm a geek or something. No one ever wants to do what I want to do and I can't find a new friend. I did, but then we had to switch classes and the same thing happened. I see less and less of him/her each day. Now he/she's into girls/boys and flirting and I'm not. I feel like I'm losing all my friends. I feel like the most unpopular person in the universe. No-one picks me for teams in PE and I have no-one to sit with in the school cafeteria.

Vignette 2

Rumours

I'm in year 9 at school. I have kind of a good guy/girl reputation at my school, and I want it to stay that way. The other day, my friends revealed to me that there had been a rumour going around about me (which I had no idea about) for the past few weeks that I have kissed another boy / girl's girlfriend/ boyfriend. I have done NOTHING of the sort, but apparently everyone is talking about it. My friends believe me that I didn't do it, but I'm pretty sure everyone else thinks I did.

Vignette 3

Exams

I am in year 10 and I am usually a good student and do OK at school. I am also good at sport, I play tennis and cycle with a cycling club. I have decided that I want to be a physiotherapist and work for the British Cycle Team when I leave school but I need to have good science exam results to do that. I have my first science exams which count toward my GCSE in a few weeks time and I know I have to do well in them. They feel much more important than any of the exams I have had in school so far because if I mess up I will have to change my career plans.

Vignette 4

Accidents

So today something bad happened to me. I borrowed my sister's ipod touch when she had told me not to but I dropped it and it totally cracked the whole screen. I came home crying and my mom saw it. My sister is away the next couple of nights but when she finds out she is going to be so mad. She used all of her birthday money to buy it and it was new. She is never going to let me use her stuff or be friends with me again.

7.14 Appendix 14 - Procedure for administering weekly measures

Procedure for weekly measures

1. When pupils arrive sit them individually and make sure they have a pen.
 - a. Remind participants that they need to complete the measures on their own without discussing their response.
 - b. Remind participants that there are no right or wrong answers.
2. Ask them to complete the PI ED first. Remind them to think about the last week, go through this clearly e.g. I want you to think about the week since last Wednesday. That is last Thursday and Friday, last weekend and Monday, Tuesday and Wednesday this week and to decide how they have been feeling.
3. Then ask them to complete the KIDCOPE. Remind them to read the vignette carefully and try to think about how they would feel and what they would do if that were them. Remind them to ask if they don't understand anything.
4. Collect in measures and thank participants before they return to lessons.

7.15 Appendix 15 - Structured Diary for completion by learning mentors after each FRIENDS session

Date	Attendance
Session Leader	

Aim of the session
Activities used

How well did you achieve your aim ?				
1	2	3	4	5
Not at all				Aim Achieved
Comments				

What would you like to change to improve the session?

How well did the pupils engage with the session?				
1	2	3	4	5
Not at all engaged				Very engaged
Please note any particularly positive or negative responses?				

7.16 Appendix 16: Semi structured interview guide for use with learning mentors

Learning mentors (role title, role in school, qualifications and experience)

1. Training

Looking back at the training you received what are your thoughts about it now?

What was particularly useful?

Did you feel confident to deliver FRIENDS?

2. Delivery

How did you deliver FRIENDS?

What types of activity did you do and why/ how well did they work?

Looking back at the delivery of FRIENDS how do you feel about it?

What was challenging?

What went well?

Is there anything you would change, and in what way?

How confident did you feel delivering the programme?

What aspects of school organisation do you feel supported you / hindered you in delivering the programme?

3. Content

Which resources did you use?

Which parts did you find useful?

Which parts did you feel were less useful?

4. Participants

How did you select the participants? Was it a good choice? Why?

How do you feel the participants benefited from the programme?

What evidence of benefits have you noticed?

5. Future use

Would you use the programme again and if so why?

What do you feel you would change?

Would you like additional support and if so what?

7.17 Appendix 17: Analysis of the delivered FRIENDS programme

Session	Learning Outcome	FRIENDS PROGRAMME <i>Items shown in red were omitted</i>	ITEMS INCLUDED IN SCHOOL SESSIONS	Comment on impact of omission on learning objectives
1. Feelings – Understanding Feelings in Ourselves and others	To understand that everyone feels anxious or worried from time to time and that it is normal. To be introduced to three coping strategies expressing feelings, helping others and remembering happy things.	Feelings – Understanding Feelings in Ourselves and others Introduction to the programme (10 mins) Getting to know your group (10 mins) Making Friends (10 mins) Working together (10 mins) We are all living beings – empathy (10 mins) <i>Similarities and Differences game (5 mins)</i> <i>Pepper and Tom (coping with worries) 10 mins</i> Relaxation activity (5 mins) Homework and rewards (15 mins)	Introduction to the programme Getting to know each other (10) Making Friends (10) Working together (10) We are all living beings (15) Relaxation Introduction to Homework	Relationship building may have begun but the concept of coping skills did not appear to be introduced.
2. Introduction to Feelings	To learn to recognise their feelings and those of others by focusing on body language and facial expressions. To understand the range of feelings, that they have different triggers and that showing them is important.	Introduction to Feelings Your Happy Thing for the Week (5 mins) Review session 1 and homework (5 mins) Let's talk about feelings (5 mins) Peppers Feelings (10 mins) Showing our Feelings is important (10 mins) <i>Understanding Feelings (15-20 minutes)</i> A Special Present for Lucy (15-20 mins) Relax and feel good	Warm up – Happy Thing for the week (5 mins) Review Session 1 and homework (5 mins) Let's talk about feelings (2 mins) Feelings Wheel Feelings Cards Peppers Feelings (10 mins) Showing our Feelings A Present for Lucy (15 mins) Relaxation activity (10)	Some work was done on feelings but the omitted activity meant that the link between having feelings and what we do to cope with them may not have been clear.

3. Introduction to Body Clues and Relaxation	<p>To recognise bodily signs that they are nervous or worried and identify some triggers for these feelings.</p> <p>To learn some relaxation activities and that these can be calming and relaxing.</p>	<p>Introduction to Body Clues and Relaxation</p> <p>Your Happy Thing for the Week (5 mins)</p> <p>Review session 2 and homework (5 mins)</p> <p>Lets start to talk about Feeling Confident and Brave (10mins)</p> <p><i>Let's learn to be a Friend to our Bodies (5 mins)</i></p> <p><i>Tom's Body Clues When Happy (5 mins)</i></p> <p>Group Body Clues Poster (15 mins)</p> <p><i>Feeling Confident and Brave (5 mins)</i></p> <p>Milkshake Breathing (5-10 mins)</p> <p><i>Robots, Towers and Jellyfish (5 mins)</i></p> <p><i>Let's Learn More Relaxation Skills – Sports Relaxation (5-10 mins)</i></p> <p><i>Learning How to Feel Good (10 mins)</i></p> <p><i>Helping Others to Feel Good (5 mins)</i></p> <p>Warm-Down, Relax and Feel Good (5 mins)</p> <p>Homework setting (5 mins)</p>	<p>Warm up activity Your Happy Thing for the Week (5 mins)</p> <p>Introduction, review session 2 and homework (5 mins)</p> <p>Lets start to talk about Feeling Confident and Brave (10mins)</p> <p>Milkshake Breathing (5-10 mins)</p> <p>What do you do to relax (post-it notes)? (5 mins)</p> <p>Group Body Clues Poster (15 mins)</p> <p>Step 2 – R=Relax (5 mins)</p> <p>Relax and feel good (5 mins)</p> <p>Set Homework (2-3 mins)</p>	<p>Relaxation techniques were covered although fewer techniques were covered than suggested and there was less consolidation of the process of identifying signs of anxiety.</p>
4. Helpful and Unhelpful Self Talk	<p>For participants to understand the concept of self talk, how this is linked to how they cope with a situation.</p> <p>For participants to begin to understand that they can change negative thoughts into more positive of helpful thoughts.</p>	<p>Helpful and Unhelpful Self Talk</p> <p>Your Happy Thing for the Week (5 mins)</p> <p>Review session 3 and homework (5 mins)</p> <p>Introduce Step 3 to being confident and brave (5 mins)</p> <p>Our Thoughts and Feelings(15 mins)</p> <p>Our Control Centre (10 mins)</p> <p><i>Unhelpful (Red) and Helpful (Green) Thoughts (2-3 mins)</i></p> <p><i>Thought Balloon Game (10-15 mins)</i></p> <p><i>Red, Yellow and Green Ballons (10 mins)</i></p> <p><i>Always Think Twice (10 mins)</i></p> <p><i>Short Story (10 mins)</i></p> <p><i>Pizza Massage (5mins)</i></p> <p>Warm-down activity (5 minute)</p> <p>Homework(5 minutes)</p>	<p>Your Happy Thing for the Week (5 mins)</p> <p>Review session 3 and homework (5 mins)</p> <p>Feeling confident and brave (10 mins)</p> <p>Our Thoughts and Feelings(15 mins)</p> <p>Our Control Centre (10 mins)</p> <p>Relax and Feel Good (5 mins)</p> <p>Homework (5 mins)</p>	<p>The concept of self talk appeared to have been introduced but the concept of identifying negative thoughts and changing them into more positive thoughts was not introduced at all.</p> <p>Some relaxation techniques (massage) were omitted.</p>

5. Changing Unhelpful Thoughts into Helpful Thoughts	<i>This session builds on session 4 by encouraging participants to change unhelpful thoughts into helpful thoughts</i>	Changing Unhelpful Thoughts into Helpful Thoughts Your Happy Thing for the Week (5 mins) Review session 4 and homework (5 mins) <i>Let's Go Over The Steps of FRIENDS We Have Learned So Far</i> Green and Red Thought Bubble Game (15mins) Changing Unhelpful Thoughts into Helpful Thoughts (10-15 mins) <i>Thought Challenger Game (10 minutes)</i> <i>Thinking in Helpful Ways (10 mins)</i> Replacing Unhelpful Thoughts (10 mins) <i>Imagination (10 mins)</i> Warm-down Activity (5 mins) Home Activities for Session 5	Your Happy Thing for the Week (5 mins) Review session 4 and homework (5 mins) Green and Red Thought Bubble Game (10mins) Changing Unhelpful Thoughts into Helpful Thoughts (10 mins) Replacing Unhelpful Thoughts (10 mins) Relax and Feel Good (5 mins) Homework (5 mins)	<i>The concept of identifying negative thoughts and changing them into more positive thoughts was introduced but reinforcement activities were missing.</i>
6. Introduction to Coping Step Plans	<i>For participants to understand the Coping Step Plan which breaks down difficult situations into manageable steps</i>	Introduction to Coping Step Plans Your Happy Thing for the Week (5 mins) Review session 5 and homework (5 mins) Introduce step 4 to being Confident and Brave (2-3 mins) Exploring Ways to Cope (5 mins) <i>Introduce the Coping Step Plan for Difficult Situations (5-15 mins)</i> <i>Facing Something Difficult (15 mins)</i> Ana and Tom's Coping Step Plan (15mins) Group Coping Step Plan (15 mins) Warm Down Activity (5 mins) Home Activities for session 6 (5-10 minutes)	Your Happy Thing for the Week (5 mins) Review session 5 and homework (5 mins) Introduce step 4 to being Confident and Brave (2-3 mins) Exploring Ways to Cope (5 mins) Ana and Tom's Coping Step Plan (15mins) Group Coping Step Plan (15 mins) Relax and Feel Good (5 mins) Homework (5 mins)	<i>The Coping Step Plan was shown as an example but there appears to have been limited explanation of a coping step plan or opportunity to apply it to themselves.</i>

7. Learning From Our Role Models and Building Support Teams	<p><i>For participants to develop problem solving skills.</i></p> <p><i>Participants learn about social support and identify role models and then identify their own social support team.</i></p>	<p>Learning From Our Role Models and Building Support Teams</p> <p><i>Your Happy Thing for the Week (5 mins)</i></p> <p><i>Review session 6 and homework (5 mins)</i></p> <p><i>Role Models in My Life (10mins)</i></p> <p><i>The Hot Seat Game (10 mins)</i></p> <p><i>Guest Speakers as Role Models(10-20 mins)</i></p> <p><i>Other People's Support Teams (5-10 mins)</i></p> <p><i>My Support Team (5-15 mins)</i></p> <p><i>I am Part of a Support Team Too (5-10)</i></p> <p><i>My Coping Step Plan Support Team (5 mins)</i></p> <p><i>Friendship Tree (10-15 mins)</i></p> <p><i>Being a Strong Tree (5-10 mins)</i></p> <p><i>'Special Thread' of love Circle of Support (5 mins)</i></p> <p><i>Warm Down Activity (5 mins)</i></p> <p><i>Home Activities for session 7</i></p>	<p><i>Your Happy Thing for the Week (5 mins)</i></p> <p><i>Review session 6 and homework (5 mins)</i></p> <p><i>Role Models in My Life (15mins)</i></p> <p><i>My Support Team (15 mins)</i></p> <p><i>My Coping Step Plan Support Team (10 mins)</i></p> <p><i>Relax and Feel Good (5 mins)</i></p> <p><i>Homework (5 mins)</i></p>	<p><i>Role models were briefly identified and individual support teams were identified. The discussion of aspects of friendship and supporting others was omitted.</i></p>
8. Using a Problem Solving Plan	<p><i>To continue with problem solving and exploring solutions.</i></p>	<p>Using a Problem Solving Plan</p> <p><i>Your Happy Thing for the Week (5 mins)</i></p> <p><i>Review session 7 and homework (5 mins)</i></p> <p><i>Introduce the 6-block Problem Solving Plan (5-10)</i></p> <p><i>Let's Practise (10-20 mins)</i></p> <p><i>Now It's Your Turn (10 mins)</i></p> <p><i>Group Problem Solving (10 mins)</i></p> <p><i>Review Step 4 to feeling confident and brave (5 mins)</i></p> <p><i>Warm Down Activity (5 mins)</i></p> <p><i>Home Activities for session 8</i></p>	<p><i>Your Happy Thing for the Week (5 mins)</i></p> <p><i>Review session 7 and homework (5 mins)</i></p> <p><i>Introduce the 6-block Problem Solving Plan (5-10)</i></p> <p><i>Let's Practise (10-20 mins)</i></p> <p><i>Review Step 4 to feeling confident and brave (5 mins)</i></p> <p><i>Relax and Feel Good (5 mins)</i></p> <p><i>Homework (5 mins)</i></p>	<p><i>The 6 block problem solving plan was introduced but participants didn't have the opportunity to try this out for themselves.</i></p>

9. Using the FRIENDS skills to Help Ourselves and Others	<p>To understand that it isn't success which is important, but the effort towards achieving success.</p> <p>Participants should learn to reward themselves for trying hard. The session focuses on practicing skills and positively reinforcing the concept that facing difficult situations builds confidence especially when they are able to cope with these situations.</p>	<p>Using the FRIENDS skills to Help Ourselves and Others</p> <p>Your Happy Thing for the Week (5 mins)</p> <p>Review session 8 and homework (5 mins)</p> <p>Introduce Step 5 to Feeling Confident and Brave (10 mins)</p> <p>Be Happy with Yourself for Trying (10mins)</p> <p>Your Coping Step Plan Rewards (5 mins)</p> <p>Practising Our Praising (10 minutes)</p> <p>Group Discussion (5 minutes)</p> <p>Thinking Like a Winner (10 minutes)</p> <p>Attention Training Exercises (10-15 minutes)</p> <p>Let's Learn the Sixth Step for Feeling Confident and Brave (5-10 minutes)</p> <p>Let's Learn the Seventh and Last Step For Feeling Confident and Brave</p> <p>Coaching Companions (10 mins)</p> <p>The FRIENDS Skills: How to Use Them (10 mins)</p> <p>Practicing Your Coping Step Plan (5-10 mins)</p> <p>Warm Down Activity (5 mins)</p>	<p>Your Happy Thing for the Week (5 mins)</p> <p>Review session 8 and homework (5 mins)</p> <p>Be Happy with Yourself for Trying (10mins)</p> <p>Thinking Like a Winner (10 minutes)</p> <p>Attention Training Exercises (10-15 minutes)</p> <p>Relax and Feel Good (5 mins)</p> <p>Homework (5 mins)</p>	<p>The idea of rewarding yourself was introduced but not explicitly linked to the stages of the coping step plan.</p> <p>The opportunity to practise applying FRIENDS skills to difficult situations was omitted.</p>
10: Review and Party	<p>To understand how to maintain their new skills and to recognise that the skills can be re-applied in the future.</p> <p>Present certificates and rewards – party.</p>	<p>Review and Party</p> <p>Your Happy Thing for the Week (5 mins)</p> <p>Review session 9 and homework (10-15 mins)</p> <p>Preparing for Future Challenges (10 minutes)</p> <p>Remembering the FRIENDS plan (5 mins)</p> <p>Sharing 'Positives'(10 mins)</p> <p>Warm Down Activity</p> <p>Present Certificates and Rewards</p> <p>Return Home Activities and Activity books (5 mins)</p> <p>Return Home Activities (5mins)</p> <p>Let's Party</p>	<p>Your Happy Thing for the Week (5 mins)</p> <p>Review session 9 and homework (5 mins)</p> <p>Be Happy with Yourself for Trying (5mins)</p> <p>Thinking Like a Winner (5 minutes)</p> <p>Attention Training Exercises (5 minutes)</p> <p>The FRIENDS Skills: How to Use Them (10 mins)</p> <p>Relax and Feel Good (5 mins)</p> <p>Homework (5 mins)</p>	<p>This session was cancelled when the end of the summer term was brought forward.</p>

7.18 Appendix 18 Transcript of interview with learning mentors

See attached CD Rom

7.19 Appendix 19 Inter rater reliability check for SCED graphs

Inter rater reliability check

The following table explains the information presented in the visual analysis of each graph.

Mean	The mean was calculated for each phase and the mean shift from one phase to the next was calculated by dividing the difference between the phases by the mean of the baseline phase. As the difference was calculated by subtracting the baseline from the intervention a positive value indicates an increase between phases and a negative value a decrease.
Level	The level was quantified by taking the last data point in the baseline phase and the first data point in the intervention phase. By dividing the larger number by the smaller a ratio describing the absolute change in level was produced.
Slope	The slope was calculated by the Excel® regression line. To show the change in slope between phases the slope for the baseline was subtracted from the intervention phase. The larger the number the larger the change in slope across phases.
Overlap	The spread of data points in the baseline phase was computed and the number of data points in the intervention phase which fell within this spread were calculated as a percentage of all the intervention data points. This figure shows the percentage of data points which overlap.
Variability	The fluctuation in the data points was noted. This was shown by reporting the standard deviation of each phase.
Immediacy of Change	This was not commented upon as the effects of the intervention are likely to be cumulative rather than resulting in an immediate change therefore absence of an immediate change does not indicate absence of intervention effect.
Consistency of results across phases	As an AB design was used this analysis was not possible.

Please look at each of the graphs, and the data presented alongside it, and consider the following question:

“How certain or convinced are you that the child’s responses underwent a practical and significant *improvement* from the baseline phase to the intervention phase”

The direction of change in scores indicating an improvement is indicated next to each dependent variable.

Your choice of response is on a scale of 5, from 1 – *not at all convinced* to 5 – *very convinced*

Please indicate your response for each individual graph on the following table. It is acceptable to return to previously analysed graphs during the process if your opinion changes.

		How certain or convinced are you that the child's responses underwent a practical and significant improvement from the baseline to the intervention phase?				
		1 – <i>not at all convinced</i>	2 - <i>uncertain</i>	3 – <i>think it is possible</i>	4- <i>reasonably certain</i>	5 – <i>very convinced</i>
Participant 1 Aaron	PI ED ↓					
	Active Coping ↑					
	Negative Coping ↓					
Participant 2 Benjamin	PI ED ↓					
	Active Coping ↑					
	Negative Coping ↓					
Participant 3 Chand	PI ED ↓					
	Active Coping ↑					
	Negative Coping ↓					
Participant 4 Dina	PI ED ↓					
	Active Coping ↑					
	Negative Coping ↓					
Participant 5 Erina	PI ED ↓					
	Active Coping ↑					
	Negative Coping ↓					

7.20 Appendix 20 Confusion table showing inter rater reliability for visual analysis of SCED graphs

Confusion table for inter rater reliability

Rater 1	1 – <i>not at all convinced</i>	2 - <i>uncertain</i>	3 – <i>think it is possible</i>	4- <i>reasonably certain</i>	5 – <i>very convinced</i>
Rater 2					
1 – <i>not at all convinced</i>	XXXXXXX 7	X 1	0	0	0
2 - <i>uncertain</i>	X 1	X 1	0	0	0
3 – <i>think it is possible</i>	0	0	XXX 3	0	0
4- <i>reasonably certain</i>	0	X 1	0	0	0
5 – <i>very convinced</i>	0	0	0	X 1	0

Using weighted Kappa (Cohen, 1968) the Interrater reliability was found to be 0.71 ($p < 0.001$), 95% CI 0.49-0.94

Statistical analyses were performed using MedCalc for Windows, version 12.5 (Software, 2013)