

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

**AN INVESTIGATIVE STUDY OF A COGNITIVE-BEHAVIOURAL AND A
BEHAVIOURAL TREATMENT FOR CHILDHOOD ANXIETY DISORDERS**

A thesis presented in partial fulfillment of the requirements for the degree
of
Doctor of Philosophy
in Psychology
at Massey University, Palmerston North,
New Zealand.

Caryl Ann Huzziff

2004

ABSTRACT

Cognitive-behavioural treatment (CBT) approaches have been designed to provide strategies for children to reduce unwanted anxiety to more normal and manageable levels. A meta-analytic review of overseas outcome studies done as a precursor to the main studies of this thesis (Huzziff et al., 2004) indicates a CBT-based treatment programme (Kendall, Chansky, Kane, Kim, Kortlander, Ronan, Sessa, & Siqueland, 1992; Ronan & Deane, 1998) to be effective for children diagnosed with an anxiety disorder. The present study used a multiple baseline across participants design and addressed the need for increased knowledge of two primary CBT components (cognitive plus behavioural and behavioural alone). Two primary objectives of the study were: (1) to replicate previous research findings for this CBT programme within a New Zealand sample and (2) to investigate the effects of the behavioural components of the CBT programme. The final, and more exploratory aspect of the study was to compare the immediate and long-term treatment effects of the CBT programme with the behavioural treatment (BT) components alone. It was hypothesised that the CBT and the BT programmes would be effective for New Zealand children. Furthermore, it was hypothesised that children, regardless of treatment allocation, would benefit similarly from treatment. In this study, a manualised, 16-session CBT programme and a manualised, eight-session BT programme were used with six children each (total N = 12), aged 6 to 12 years, with anxiety disorders. A single-case research design was used. Children were randomly allocated to condition, using a yoked methodology to allow for selected group comparisons. Diagnoses, parent and teacher reports, and child self-reports were used to assess child treatment outcome. Additional measures assessed whether the programmes designed for children were capable of producing change in anxiety (and depression) for parents. Overall, the results replicated previous outcome findings for CBT studies. The results showed that the majority of participants, regardless of treatment allocation, (a) no longer met diagnostic criteria for an anxiety disorder, (b) had an increased ability to cope and decreased anxiety related problems, and (c) maintained treatment gains across 3-, 6-, and 12-month follow-up. Overall, the BT condition produced more initial changes in targeted areas of functioning than the first half of CBT and more than CBT as a whole. However, at 12-month follow-up, the CBT condition appeared to show greater effectiveness. Also, for parents with elevated distress scores at pre-treatment, positive change across condition was found. The

findings are discussed and considered with reference to the role of cognitive and behavioural treatment components, potential benefits for parent functioning, research limitations, and possible avenues for future research. The present study's results have implications for informing future research regarding therapist choice of treatment modality and tailoring therapy to individual clients.

ACKNOWLEDGEMENTS

First, and foremost I wish to thank Dr Kevin Ronan for his guidance and supervision. His patience, fostering spirit, and above all, confidence in me throughout this project motivated me to complete a job that at times felt impossible.

Thanks are due to my second supervisor, Dr Allan Winton, for comments on thesis drafts and behavioural expertise. For their statistical expertise I would like to thank Dr Ross Flett and Dr John Spicer. For her time and clinical expertise, Dr Rebecca Story.

I would like to thank the staff at the Massey University Psychology Clinic for their support and assistance during the treatment and assessment phase of my project. Special thanks go to Dr Sally Wills and Robyn Girling-Butcher, the other members of the research team. Special thanks also go to the children and parents who participated in the research.

I would like to thank those who supported me behind the scenes. Dr John Podd for his guidance in leading me away from my thesis alternative – a life on the high seas. Dr Melanie Martin for considering joining me in my thesis alternative. Dr Gillian Madison-Smith and Dr Cathie Collinson for all the ‘sanity’ checks. Tricia Stuart for her endless editing assistance, et cetera.

On a personal note, I would like to thank my family, Tom and Fay Huzziff, Robyn Vertongen and Jim Graham for their patience, understanding, and support. Finally, special thanks go to my daughter, Ana – a wee blessing, who helped motivate the completion of this thesis.

TABLE OF CONTENTS

ABSTRACT	I
ACKNOWLEDGEMENTS.....	III
TABLE OF CONTENTS.....	V
LIST OF FIGURES	IX
LIST OF TABLES	X
CHAPTER 1: INTRODUCTION	1
DEFINITIONS	2
NORMATIVE DATA	2
MALADAPTIVE FEARS AND ANXIETIES	4
DIAGNOSIS	5
ASSESSMENT	7
TREATMENT	8
SUMMARY	9
CHAPTER 2: ANXIETY DISORDERS AND STRUCTURE.....	11
DIAGNOSES AND CLASSIFICATION	11
Specific Anxiety Disorders	12
Prevalence and Comorbidity.....	13
ANXIETY STRUCTURE	14
SUMMARY	17
CHAPTER 3: COGNITIVE AND BEHAVIOURAL THEORIES OF CHILDHOOD ANXIETY	19
BEHAVIOURAL THEORIES.....	19
Classical/Respondent Conditioning	19
Operant Conditioning.....	21
Two-Factor Model	23
Modelling	23
COGNITIVE THEORIES	24
Information processing.....	25
A COGNITIVE-BEHAVIOURAL MODEL	29
Tripartite/Neo-conditioning Model.....	29
DEVELOPMENTAL CONSIDERATIONS.....	30
SUMMARY	31
CHAPTER 4: MULTIMODAL ASSESSMENT	33
THE CHILD CLIENT	33
Developmental and Contextual Considerations	34

COGNITIVE-BEHAVIOURAL ASSESSMENT METHODS.....	35
Utility and Quality	35
Assessment Methods	36
Behavioural Assessment	41
Cognitive Assessment	45
Physiological Assessment.....	46
SUMMARY.....	47
 CHAPTER 5: TREATMENT.....	49
PSYCHOTHERAPY OUTCOME.....	49
BEHAVIOUR THERAPY.....	50
Systematic Desensitisation.....	51
Modelling	52
Contingency Management	53
COGNITIVE SELF-CONTROL TRAINING	54
COGNITIVE-BEHAVIOURAL THERAPY	55
COGNITIVE-BEHAVIOURAL THERAPY: MANUALISED TREATMENT	56
Treatment Research.....	58
Individual-Based CBT	59
Family- and Group-Based CBT	60
COMPARATIVE RESEARCH: BT VERSUS CBT	62
SUMMARY.....	64
 CHAPTER 6: RESEARCH PROPOSAL.....	65
RESEARCH RATIONALE	65
SUMMARY OF OBJECTIVES	67
Objective One	67
Objective Two.....	67
Objective Three.....	67
Objective Four.....	67
DESIGN RATIONALE	68
Manualised Treatment.....	68
Single-Case Research Design	69
SUMMARY OF HYPOTHESES	70
SUMMARY	71
 CHAPTER 7: METHOD.....	73
PARTICIPANTS	73
MEASURES	74
Structured Diagnostic Interview	74
Children's Self-Report Measures	78
Parent Measures	89
Parent Self-Report Measures	92
Teacher Report.....	94
Therapy Measures	97
History and General Demographic Information	98
DESIGN	99

PROCEDURE	100
Recruitment	100
Assessment.....	101
Random Allocation	101
Setting and Therapist.....	103
Treatment	103
Treatment Materials	105
Assessment and Treatment Integrity.....	105
Ethical Considerations	106
CHAPTER 8: RESULTS.....	109
TREATMENT FIDELITY AND BOOSTER SESSIONS	109
DIAGNOSTIC RELIABILITIES	109
INDIVIDUAL CASE STUDY RESULTS: COGNITIVE BEHAVIOURAL TREATMENT	110
Child Diagnoses	110
Child Reports	110
Parent Reports	115
Teacher Reports	117
Parent and Child Reports Across Baseline, Treatment and Post-Treatment.....	118
Parent Self-Report.....	125
Therapy	126
Clinical Significance	128
INDIVIDUAL CASE STUDY RESULTS: BEHAVIOURAL TREATMENT	129
Child Diagnoses	129
Child Reports	130
Parent Reports	132
Teacher Reports	136
Parent and Child Reports Across Baseline, Treatment and Post-Treatment.....	136
Parent Self-Report.....	141
Parent Self-Report.....	142
Therapy	143
Clinical Significance	145
COMPARATIVE TREATMENT ANALYSES: WITHIN AND BETWEEN TREATMENT CONDITION	146
Power and Effect Size	146
Within Group Analyses.....	147
Comparative Treatment Group Analyses: Pre-treatment.....	150
Comparative Treatment Group Analyses: Treatment outcome	152
CHAPTER 9: DISCUSSION	155
SUMMARY OF MAJOR FINDINGS.....	155
Objective One: Replication of Previous Research Findings	156
Objective Two: The Role of Behavioural Treatment Components	158
Objective Three: Long Term effects of CBT and BT	160
Objective Four: Secondary Effects of Treatment for Parents	161
INTERPRETATION AND IMPLICATIONS	161
LIMITATIONS OF THE PRESENT STUDY	165
RECOMMENDATIONS FOR FUTURE RESEARCH.....	169
CONCLUSION.....	172

REFERENCES.....	175
APPENDIX A: SPECIFIC ANXIETY DISORDERS	195
APPENDIX B: META-ANALYSIS OF MANUALISED CBT FOR ANXIOUS YOUTH..	197
APPENDIX C: PARTICIPANT SUMMARY.....	215
CBT PARTICIPANTS	215
Participant 02	215
Participant 03	215
Participant 06	216
Participant 07	216
Participant 09	216
Participant 12	217
BEHAVIOURAL TREATMENT PARTICIPANTS	217
Participant 01	217
Participant 04	218
Participant 05	218
Participant 08	219
Participant 10	219
Participant 11	219
APPENDIX D: INFORMATION SHEETS FOR PARENTS/GUARDIANS	221
APPENDIX E: INFORMATION SHEET FOR CHILDREN.....	223
APPENDIX F: PARENT/GUARDIAN CONSENT FORM	225
APPENDIX G: CHILD CONSENT FORM.....	227
APPENDIX H: OUTLINE OF <i>BT MANUAL</i> SESSION OBJECTIVES AND GOALS.....	229
APPENDIX I: ADDITIONAL RESULTS.....	233

LIST OF FIGURES

Figure 8.1. Changes in parent and child reported child trait anxiety (STAIC-T-P and STAIC-T) across assessment and treatment sessions for CBT participants Eve, Hope and Matt. B1 to B5 = weekly baseline points, 1 to 16 = weekly treatment sessions, PTT = post-treatment, and 3M, 6M and 12M = 3-, 6- and 12-month follow-up assessment points, respectively.....	120
Figure 8.2. Changes in parent and child reported child trait anxiety (STAIC-T-P and STAIC-T) across assessment and treatment sessions for CBT participants Joy, Ron and Sid. B1 to B8 = weekly baseline points, 1 to 15 = weekly treatment sessions, PTT = post-treatment, and 3M, 6M and 12M = 3-, 6- and 12-month follow-up assessment points, respectively.....	121
Figure 8.3. Changes in parent and child reported coping skills (mean CQ score for three target complaints across assessment and treatment sessions) for CBT participants Eve, Hope and Matt. B1 to B5 = weekly baseline points, 1 to 16 = weekly treatment sessions, PTT = post-treatment, and 3M, 6M and 12M = 3-, 6- and 12-month follow-up assessment points, respectively.....	123
Figure 8.4. Changes in parent and child reported coping skills (mean CQ score for three target complaints across assessment and treatment sessions) for CBT participants Joy, Ron and Sid. B1 to B8 = weekly baseline points, 1 to 15 = weekly treatment sessions, PTT = post-treatment, and 3M, 6M and 12M = 3-, 6- and 12-month follow-up assessment points, respectively.....	124
Figure 8.5. Changes in parent and child reported child trait anxiety (STAIC-T-P and STAIC-T) across assessment and treatment sessions for Carl, Cory and Rose. B1 to B6 = weekly baseline points, 1 to 8 = weekly treatment sessions, PTT = post-treatment, and 3M, 6M and 12M = 3-, 6- and 12-month follow-up assessment points respectively.....	138
Figure 8.6. Changes in parent and child reported child trait anxiety (STAIC-T-P and STAIC-T) across assessment and treatment sessions for Sam, Bob and Job. B1 to B8 = weekly baseline points, 1 to 8 = weekly treatment sessions, PTT = post-treatment, and 3M, 6M and 12M = 3-, 6- and 12-month follow-up assessment points respectively.....	139
Figure 8.7. Changes in parent and child reported coping skills (mean CQ score for three target complaints across assessment and treatment sessions) for Carl, Cory and Rose. B1 to B6 = weekly baseline points, 1 to 8 = weekly treatment sessions, PTT = post-treatment, and 3M, 6M and 12M = 3-, 6- and 12-month follow-up assessment points respectively.....	140
Figure 8.8. Changes in parent and child reported coping skills (mean CQ score for three target complaints across assessment and treatment sessions) for Sam, Bob and Job. B1 to B8 = weekly baseline points, 1 to 8 = weekly treatment sessions, PTT = post-treatment, and 3M, 6M and 12M = 3-, 6- and 12-month follow-up assessment points respectively.....	141

LIST OF TABLES

Table 7.1. An overview of CBT and BT participant variables including pre-treatment diagnoses and waitlist periods.....	75
Table 7.2. Participant allocation to CBT or BT and waitlist conditions	102
Table 8.1. CBT Participants' Diagnoses Over Time.....	111
Table 8.2. Child Self-Report Scores on Outcome Measures for CBT Condition.	112
Table 8.3. Parent Scores on Measures on Child Outcome Measures for CBT Condition. 117	
Table 8.4. Teacher Scores on Measures on Child Outcome Measures for CBT Participants.	118
Table 8.5. CBT Parent Self-Report Scores on Outcome Measures.....	126
Table 8.6. BT Participants' Diagnoses Over Time	129
Table 8.7. Child Self-Report Scores on Outcome Measures for BT Condition.	133
Table 8.8. Parent Scores on Child Outcome Measures for BT Condition.	135
Table 8.9. Teacher Scores on Measures on Child Outcome Measures for BT Participants.	136
Table 8.10. BT Parent's Self-Report Scores on Outcome Measures	143
Table 8.11. Analysis of CBT Effects and Maintenance, Showing Degrees of Freedom (<i>df</i>), <i>t</i> -scores, and Effect Size (ES)	148
Table 8.12. Analysis of BT Effects and Maintenance Showing Degrees of Freedom (<i>df</i>), <i>t</i> -scores, and Effect Size (ES).....	149
Table 8.13. Means (M) and Standard Deviations (SD) for Dependent Measures for CBT and BT Treatment Conditions.....	152
Table 8.14. Analysis of Treatment Effects between Treatment Condition and across Time showing Means (M) and Standard Deviations (SD) for Mean Change Scores, Degrees of Freedom (<i>df</i>), <i>t</i> -scores (<i>t</i>) and Effect Sizes (ES).....	154
Table I.1. Child Self-Report Scores on the Fourth Question of the Coping Questionnaire (CQ-C): How much do you think this program will help you feel less upset?	233

Table I.2. Parent Reported Scores on the Fourth Question of the Coping Questionnaire (CQ-P): How much do you think this program has helped your child to feel less upset?	233
Table I.3. Mean CBT and BT Child's Perception of Therapeutic Relationship (CPTR) scores following treatment	234
Table I.4 CBT and BT Child and Parent Recall of Content Questionnaire (RCQ) responses to open-ended questions regarding treatment at post-treatment and 12-month follow-up.....	235