The Impact of School-Based Aggression Replacement Training on Emotion Regulation and Aggressive Behaviour

A thesis presented in partial fulfilment of the requirements for the degree of

Doctorate of Clinical Psychology

at Massey University, Wellington, New Zealand.

Freya Smith

2014

ABSTRACT

This research evaluates the effectiveness and implementation of Aggression Replacement Training (ART) with a group of New Zealand (NZ) students aged 13-15 years (n=18). Aggression is a significant problem in NZ schools and despite recent progress with school-wide and individually targeted interventions, there are few evaluations of interventions with these adolescents. Deficient emotion regulation is a major risk factor in youth aggression. Although emotion regulation skills are targeted by many aggression interventions, outcome measures less frequently assess these skills than other social information processing abilities. This thesis links research evidence of the role of emotion in aggression, to the techniques taught in ART, to support the hypothesis that ART improves emotion regulation and reduces aggression. Analyses of the change in mean group scores and individual-level analyses indicate improvements in ART participants' emotion regulation, anger control and social skills over the course of intervention and follow-up. These analyses also indicate reductions in ART participants' externalising, problem behaviours and cognitive distortions. These findings support the use of ART as effective in reducing the risk of aggressive behaviour, and as an alternative to exclusionary discipline, in NZ schools. ART appears to be culturally acceptable and may offer a less resource intensive intervention than individual intervention plans.

Keywords: aggression, emotion regulation, adolescence, social information processing, aggression replacement training

ACKNOWLEDGEMENTS

This research was only possible due to the support and encouragement of many individuals, who gave generously with their time and advice. A particular thank you to Hazel, Dianne and Nicole, without their positive attitude and perseverance this project would not have left the ground. Much gratitude also to the staff of the schools involved for their guidance and collaboration. To those students who gave so much of themselves, I hope their shining moments in sessions multiply into many more of admirable determination and integrity.

A huge thank you to Ross Flett for his willingness to become involved late in the piece, for his optimism, humour, problem solving, and for working on weekends. I am also grateful to Angela McNaught for her time and input.

Thanks to Jess for sharing this journey, for the coffee, camaraderie, and confidence in me when I needed it most. I am forever grateful to my parents for inspiring and nurturing me, and to Alby, for everything, thank you.

CONTENTS

ABSTRACT	III
ACKNOWLEDGEMENTS	IV
LIST OF FIGURES	VI
LIST OF TABLES	VIII
INTRODUCTION	1
CHAPTER 1: AGGRESSION	3
CHAPTER 2: EMOTION REGULATION	30
CHAPTER 3: RESEARCH EVIDENCE OF THE ROLE OF EMOTION PROCESSES IN SIP	51
CHAPTER 4: AGGRESSION INTERVENTIONS: IS ART SUITABLE FOR NZ SCHOOLS?	70
CHAPTER 5: METHOD	94
CHAPTER 6: RESULTS	109
CHAPTER 7: DISCUSSION	161
REFERENCES	205
APPENDICES	236

LIST OF FIGURES

Figure 1.1. The biopsychosocial model of the development of conduct disorder 17

Figure 1.2. An integrated model of emotion processes and cognition in social information processing 24

Figure 3.1. Exiting the angry behaviour cycle 53

Figure 5.1. Flow chart of parent and student consent, screening and programme completion 97

Figure 6.1. Difficulties with Emotion Regulation total scale mean from T1 to T4 119

Figure 6.2. Difficulties with Impulsivity subscale mean from T1 to T4 120

Figure 6.3. Lack of Clarity subscale mean from T1 to T4 121

Figure 6.4. Lack of Awareness subscale mean from T1 to T4 123

Figure 6.5. Lack of Strategies subscale mean from T1 to T4 123

Figure 6.6. Goal-Directed Difficulties subscale mean from T1 to T4 124

Figure 6.7. Non-Acceptance subscale mean from T1 to T4 125

Figure 6.8. Anger Expression-Out scale mean from T1 to T4 129

Figure 6.9. Trait Anger scale mean from T1 to T4 130

Figure 6.10. Trait Anger – Temperament subscale mean from T1 to T4 130

Figure 6.11. Trait Anger – Reactivity subscale mean from T1 to T4 131

Figure 6.12. Anger Control scale mean from T1 to T4 132

Figure 6.13. Hyperactivity subscale mean from T1 to T4 134

Figure 6.14. Externalising subscale mean from T1 to T4 137

Figure 6.15. Problem Behaviours subscale mean from T1 to T4 138

Figure 6.16. Social Skills Total Scale mean from T1 to T4 140

Figure 6.17. HIT Total scale mean from T1 to T4 144

Figure 6.18. Overt scale mean from T1 to T4 145

Figure 6.19. Oppositional Defiance subscale mean from T1 to T4 146

Figure 6.20. Physical Aggression subscale mean from T1 to T4 146

Figure 6.21. Covert scale mean from T1 to T4 147

Figure 6.22. Stealing subscale mean from T1 to T4 148

Figure 6.23. Lying subscale mean from T1 to T4 149

LIST OF FIGURES CONT.

Figure 6.24. Assuming the Worst subscale mean from T1 to T4 150

Figure 6.25. Blaming Others subscale mean from T1 to T4 151

Figure 6.26. Minimising/Mislabelling subscale mean from T1 to T4 152

Figure 6.27. Self-Centred subscale mean from T1 to T4 152

Figure 6.28. Mean volunteering score for participants across all 30 ART sessions 157

Figure 6.29. Participants' feedback about the ART programme and modules 160

Figure B2.1. Mean co-operating score for participants across all ART sessions 246

Figure B2.2. Mean engagement score for participants across all ART sessions 246

Figure B2.3. Mean enthusiasm score for participants across all ART sessions 247

Figure B2.4. Mean understanding score for participants across all ART sessions 247

Figure B2.5. Mean disruption score for participants across all ART sessions 247

LIST OF TABLES

Table 1. Risk factors for violence at age 15 to 18 by domain 15

Table 5.1. Gender and ethnicity of students completing the programme and assessments 98

Table 6.1. Descriptive statistics and alpha range for ART participants on the DERS from T1 to T4 (N=18) with control comparison (n=428) 118

Table 6.2. Main effect ANOVA results on the DERS from T1 to T4 (N=18) 119

Table 6.3. Descriptive statistics and alpha range for ART participants on the STAXI-2 C/A from T1 to T4 (N=18) with normative comparison (n=52) 128

Table 6.4. Main effect ANOVA results on the STAXI-2 C/A from T1 to T4 (N=18) 129

Table 6.5. Descriptive statistics and alpha range for ART participants on the SSIS from T1 to T4 (N=18) with normative comparison (n= 127) 135

Table 6.6. Main effect ANOVA results on the SSIS from T1 to T4 (N=18) 136

Table 6.7. Descriptive statistics and alpha range for ART participants on the HIT from T1 to T4 (N=18) with normative comparison (n=412) 142

Table 6.8. Main effect ANOVA results on the HIT from T1 to T4 (N=18) 143

Table 6.9. Percentage of participants who achieved RCI on measures showing significant mean difference from pre-intervention to follow-up 154

Table 6.10. Descriptive statistics and t-test results for observational behaviour ratings for early and late ART sessions (N=18) 158

Table B1. In session observational rating scale 244

LIST OF TABLES CONT.

Table D1. Pre-interventions (Time 1) DERS scale intercorrelations and correlations with STAXI-2 C/A, SSIS and HIT 251

Table D2. Pre-intervention (Time 1) STAXI-2 C/A scale intercorrelations and correlations with SSIS and HIT 252

Table D3. Pre-intervention (Time 1) SSIS scale intercorrelations and correlations with HIT 253

Table D4. Pre-intervention (Time 1) HIT intercorrelations 254

Table D5. Follow-up (Time 4) DERS scale intercorrelations and correlations with STAXI-2 C/A, SSIS and HIT 255

Table D6. Follow-up (Time 4) STAXI-2 C/A scale intercorrelations and correlations with SSIS and HIT 256

Table D7. Follow-up (Time 4) SSIS scale intercorrelations and correlations with the HIT 257

Table D8. Follow-up (Time 4) HIT intercorrelations 258

Table F1. Division of measures with partner study 260