

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.

The efficacy of Aggression Replacement Training on interpersonal deficits and aggressive subtypes  
in New Zealand high school students.

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

Doctorate

in

Clinical Psychology

at Massey University, Wellington

New Zealand.

Jessica Mills

2014

## **Abstract**

Aggression Replacement Training (ART) is a three component intervention that targets the emotional, cognitive, and behavioural deficits associated with antisocial behaviour. Despite the growing number of outcome studies demonstrating the efficacy of ART in reducing antisocial behaviours, gaps in our understanding of how ART operates to create positive change remain. The current research aimed to reduce some of these gaps by trialling ART with three groups of high school students in New Zealand schools. Improvements in interpersonal competence that the intervention is claimed to target, empathy, and the proactive and reactive tendencies of aggression were investigated. This research also aimed to show the added value of the Moral Reasoning Training (MRT) component, over and above that of the Anger Control Training (ACT) and Social Skills Training (SST) components, by delivering the MRT component last and assessing change in variables over the course of the intervention.

Overall the current research found multiple improvements from pre-test to follow-up, across a range of measures, consistent with theoretical expectations. Findings particularly suggest that ART may be a useful intervention for reducing reactive aggressive tendencies. However, little evidence was seen to suggest the ART is effective for reducing proactive aggression. This research also found changes across the course of the intervention that suggest the MRT component is a valuable addition to the overall intervention: particularly in reducing the cognitive distortions associated with overt antisocial behaviour, as well as increasing global stage moral reasoning. ART seems to be an acceptable intervention for students that warrants further investigation for use with students in New Zealand.

## **Acknowledgements**

Firstly I would like to thank the schools and students that participated in this project, especially those staff who were enthusiastic and supportive from beginning to end, without whom this research would not have been possible. I would also like to extend a big thank you to Freya Smith who co-facilitated the ART programme with me and helped to make a challenging project a more enjoyable experience. Thanks also to Katharine Wood for her assistance with inter-rating the SMR-SF (no mean task) and to my many proof-readers!

I would also like to give my heartfelt thanks to the multitude of people that have supported me through the process of completing this thesis including my family, friends, flatmates, and colleagues – too numerous to name but you know who you are. I could not have completed this piece of work without your support and encouragement.

Thank you also to my supervisor Associate Professor Ross Flett for his guidance, support and patience.

## Contents

Abstract .....	2
Acknowledgements .....	3
Contents .....	4
List of Figures .....	6
List of Tables .....	8
List of Appendices .....	9
Introduction.....	10
Aggressive/Antisocial Behaviour in Adolescents.....	13
Interpersonal deficits & Aggressive/Antisocial Behaviour.....	14
Interpersonal deficit interventions for Aggressive/Antisocial Behaviour.....	20
Aggression Replacement Training (ART) .....	25
ART outcome evaluations.....	27
ART within school settings.....	30
Are all components created equal? .....	32
The Moral Reasoning Component .....	37
Moral Reasoning Development.....	38
Moral Reasoning Delay.....	43
ART and Empathy.....	50
Reactive and proactive aggression: Aggressive function subtypes .....	54
The Functions of Aggression .....	54
Reactive Aggression.....	56
Proactive Aggression .....	57
ART and the Aggressive Subtypes .....	59
The current research.....	64
Research Questions: .....	65

Method .....	67
Participants .....	67
Sampling and recruitment procedures.....	68
Design .....	70
Measures .....	70
Other data sources .....	76
Results.....	81
Social Skills and Problem Behaviours – Social Skills Improvement System (SSIS) .....	85
Moral Reasoning – Sociomoral Reflection Measure – Short Form (SMR-SF) .....	93
Cognitive Distortions – How I Think (HIT) Self-Report Questionnaire .....	97
Empathy – the Interpersonal Reactivity Index (IRI).....	114
Reactive and Proactive Aggression – The Forms and Functions of Aggression Measure.....	120
In-Session Observational Data.....	127
Discussion .....	132
Research Question One – Interpersonal Variables.....	132
Research Question Two - The Moral reasoning Component.....	141
Research Question Three - Empathy.....	143
Research Question Four - Aggressive Function Subtypes .....	144
Research Question Five - Acceptability.....	147
Other considerations.....	149
Implementation Issues.....	150
Limitations and recommendations for further study .....	152
Conclusion.....	155
References:.....	156
Appendices.....	178

## List of Figures

Figure 1: A social-information processing model of children's social adjustment.	17
Figure 2: Kohlberg's stages of moral reasoning (taken from Palmer, 2003b)	39
Figure 3: Selman's stages of social-perspective taking (Taken from Palmer, 2003b)	40
Figure 4: Gibbs' stages of sociomoral reasoning Note. Adapted from Palmer (2003b)	42
Figure 5: Outline of research procedure	80
Figure 6: Problem Behaviour group mean scores from T1 to T4	88
Figure 7: Hyperactivity/Inattention (Hyp/Int) subscale group mean scores from T1 to T4	89
Figure 8: Externalising subscale group mean scores from T1 to T4	90
Figure 9: Total Social Skills group mean scores from T1 to T4	91
Figure 10: Group Means for the Sociomoral Reasoning – Short Form (SMR-SF) score	95
Figure 11: How I Think (HIT) Total group mean scores from T1 to T4	100
Figure 12: How I Think (HIT) Blaming Others (BO) group mean scores from T1 to T4	102
Figure 13: How I Think (HIT) Assuming the Worst (AW) group mean scores from T1 to T4	103
Figure 14: How I Think (HIT) Minimising/Mislabelling (MM) group mean scores from T1 to T4	104
Figure 15: How I Think (HIT) Self-Centred (SC) group mean scores from T1 to T4	105
Figure 16: How I Think (HIT) Overt (OV) group mean scores from T1 to T4	107
Figure 17: How I Think (HIT) Opposition-Defiance (OD) group mean scores from T1 to T4	108
Figure 18: How I Think (HIT) Physical Aggression (PA) group mean scores from T1 to T4	109
Figure 19: How I Think (HIT) Covert (COV) group mean scores from T1 to T4	110
Figure 20: How I Think (HIT) Lying (L) group mean scores from T1 to T4	111
Figure 21: How I Think (HIT) Stealing (S) group mean scores from T1 to T4	112
Figure 22: Empathic Concern (EC) group mean scores from T1 to T4	117
Figure 23: Perspective Taking (PT) group mean scores from T1 to T4	118

Figure 24: Reactive Overt (RO) subscale from from T1 through to T4.	123
Figure 25: Group means for the Total Reactive Aggression from T1 through to T4.	124
Figure 26: Group means for the Total score from T1 through to T4.	125
Figure 27: Mean scores of In-Session Behaviour Scales from T1-T4	129
Figure 28: Mean responses to participant feedback likert scale questions	131
Figure 29: Communication (Com) scale mean group scores of the SSIS T1-T4	197
Figure 30: Cooperation (Coop) scale mean group scores of the SSIS T1-T4	197
Figure 31: Assertion (Assr) scale mean group scores of the SSIS T1-T4	198
Figure 32: Responsibility (Rsp) scale mean group scores of the SSIS T1-T4	198
Figure 33: Empathy (Emp) scale mean group scores of the SSIS T1-T4	198
Figure 34: Engagement (Eng) scale mean group scores of the SSIS T1-T4	199
Figure 35: Internalising (Int) scale mean group score of the SSIS T1-T4	199
Figure 36: Bullying (Bully) scale mean group scores of the SSIS T1-T4	199
Figure 37: Reactive Relational Aggression group mean scores from T1 to T4	201
Figure 38: Reactive Total Aggression group mean scores from T1 to T4	201
Figure 39: Proactive Overt Aggression group mean scores from T1 to T4	202
Figure 40: Proactive Relational Aggression group mean scores from T1 to T4	202
Figure 41: Proactive Total Aggression group mean scores from T1 to T4	202



## List of Tables

Table 1: Demographic information for final sample .....	67
Table 2: Group mean scores (N=18) and ANOVA results for scales of the How I think (SSIS) questionnaire. ....	87
Table 3: Group mean scores (N=17) and ANOVA results for scales of the Sociomoral Reasoning – Short Form from T1-T4. ....	95
Table 4: Internal Consistencies, group mean scores and ANOVA results for scales of the How I think (HIT) questionnaire.....	99
Table 5: Group mean scores and ANOVA results for the Empathic Concern and Perspective Taking subscales of the Interpersonal Reactivity Index.....	116
Table 6: Group mean scores from T1-T4 and ANOVA results for scales of the Forms and Functions of Aggression questionnaire. ....	122
Table 7: Average means and standard deviations for in-session behaviour scales.....	128
Table 8: Inter-item correlation scores for the SSIS scales .....	196
Table 9: Average Inter-Item Correlations for the Interpersonal Reactivity Index subscales.....	200

## List of Appendices

Appendix A.....	178
Appendix A1: School Information Sheet.....	178
Appendix A2: Letter to parents.....	184
Appendix A3: Parent/caregiver information sheet.....	186
Appendix A4: Student information sheet.....	191
Appendix B .....	193
Appendix B1: Post-session notes template .....	193
Appendix B2 - In session Behaviour Scales: .....	194
Appendix C .....	196
Appendix C1: Inter-item correlation scores for the Social Skills Improvement System .....	196
Appendix C2: Change graphs for SSIS subscales.....	197
Appendix C3: Inter-item correlation scores for the Interpersonal Reactivity Index (IRI).....	200
Appendix C4: Change graphs for remainder of the Forms and Functions of Aggression Measure .....	201