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.

Client and Therapist Variability with Psychotherapy Homework: A Preliminary Psychometric Evaluation of Two Scales

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

of

Master of Arts

in

Psychology

at Massey University,

Albany

Margo-ann D. Munro

2006

Abstract

The therapeutic use of homework assignments is an integral feature of Cognitive Behaviour Therapy (CBT) and is believed to be important in producing and maintaining client treatment gains. While there is empirical and theoretical support suggesting that homework completion may be associated with improved outcome, few studies have directly investigated specific therapist behaviours used in the integration of homework into practice. Similarly, research on client homework completion has, by far, focused solely on the quantity of homework completion rather than on any other factors found to be associated with increased client engagement with homework assignments. The recently developed Homework Adherence and Competence Scale (HAACS) was designed to specifically assess therapist competence and adherence to recommended homework behaviours used to administer homework. As a new measure of client homework completion, the Homework Rating Scale-II (HRS-II), extends the assessment of client homework completion beyond quantity only and provides a measure of the cognitive and behavioural determinants of client homework completion. The present study presents a psychometric evaluation of both the HAACS and HRS-II when rated by independent observers. Further, the present study sought to examine therapist differences in adherence and competence in administrating homework as well as investigating the temporal pattern of client homework completion.

ACKNOWLEDGEMENTS

I would like to acknowledge Massey University for their funding contributions that made this project possible. My supervisor's research grant that funded the raters in this study, and my Massey Scholarship, which paid for the tuition in my paper year.

I would like to commend Dr. Nik Kazantzis for his extreme patience and understanding throughout the course of my thesis. Through all the trials and tribulations, his support, enthusiasm and commitment to the project has made it worthwhile. I would also like to extend thanks to Dr. Keith Dobson from the University of Alberta for his generosity in allowing me to have access to the DVDs and CTS ratings that formed the basis for my project. His feedback throughout the project has proved invaluable.

A huge thanks to Angela and Tracey, my raters who spent innumerable hours watching and rating the DVDs for the study. Their continued enthusiasm for the project made it all worthwhile and provided me with a greater understanding of the back roads in western and central Auckland. Also, I would like to thank the current and past members of the research lab group for their input and ongoing support for my project. I would especially like to thank Paul. Judith, Gregg and Aniel who have supplied priceless guidance regarding the process of completing a thesis.

I would also like to acknowledge Dr. Barry MacDonald, who supplied great statistical support when I needed it most. I could not leave out the library staff, especially Joy Oehlers, whose help in securing and extending book loans was greatly appreciated. As well, a big thank-you to the folks in IT who helped me solve my Mac "incompatibility with library databases" problem.

I would like to thank everyone who played a part in the ongoing saga, which was my thesis (I'm seriously thinking of giving it all up to go write Country and Western songs, as I think I have enough material to succeed!).

I thank the members of the Solo Mums Club for their help in supplying childcare and anti-stress techniques when needed it. I thank Tracey and Colin, Nancy and Paul and all the others who provided a shoulder and an ear when I needed it. As for Liz, well, thanks for all the coffee and for running the batteries dead on my phone as we discussed our theses. I look forward to finally celebrating their completion with you.

Finally, and most importantly, I would like to acknowledge my family for their ongoing support and patience throughout this project. To my parents, who have phoned every week from Nova Scotia, Canada to see how it was going: thank you for being there, if not in person. To my son Ian: thank you for being such a great kid, I love ya heaps... ZOZOZO!

TABLE OF CONTENTS

Abstract	ii
Acknowledgements	iv
List of Tables	xiv
List of Figures	xvi
CHAPTER 1	
Introduction	1
Overview	1
Introduction	1
Empirical Support for Homework	2
Definitions	6
Cognitive Behavior Therapy Research Project	8
Chapter Outline	10
CHAPTER 2	
Homework in Psychotherapy	13
Overview	13
Behavioural Theories	14
Classical Conditioning	14
Operant Conditioning	16
Theory of Generality	18
Cognitive Theories	18
Social Cognition	19
Cognitive Theory	91

Summary	22
CHAPTER 3	
Homework Completion	25
Overview	25
Theories of Compliance	25
Cognitive Dissonance Theory	26
Stages of Change	26
Protection Motivation Theory and Volitional Strategies	28
Theory of Planned Behaviour	29
Measuring Compliance	30
Homework Rating Scale-II	31
The Integration of Homework into Practice	34
Guiding Model for Practice	36
Homework Review	37
Homework Design	38
Homework Assign	39
Summary	41
CHAPTER 4	
Therapist Adherence and Competence	43
Overview	43
The importance of treatment integrity	44
Therapist Adherence and Competence	45
Assessment of Therapist Adherence and Competence	46

Assessment of Therapist Competence and Adherence in CBT	47
Therapist Competence and Adherence in Homework Integration	48
Homework Adherence and Competence Scale	49
Summary	51
CHAPTER 5	
Psychometric Theory	55
Overview	55
Psychometric Theory	56
Measurement in Psychotherapy Research	57
The Reporting of Psychometric Evidence	58
Validity Evidence	61
Reliability Evidence	62
Recent Psychometric Studies in Clinical Psychology	64
Summary	66
CHAPTER 6	
The Present Study	67
Overview	67
Aims	67
Specific Hypotheses for Study One	69
Score Reliability of HAACS	69
Internal Consistency of HAACS	70
Correlational Analyses	70
Evaluation of Therapist Differences	71
The Temporal Nature of Adherence and Competence	71

Specific Hypotheses for Study Two	
Score Reliability of HRS-II	72
Correlational Analysis	72
Internal Consistency of HRS-II	72
Client Variability in Homework Completion	73
CHAPTER 7	
Method Study One	75
Session Data	75
Independent Raters	76
Training	76
Measures	78
Homework Adherence and Competence Scale	78
Therapist Homework Assignment Competency Scale	82
Cognitive Therapy Scale	82
Procedure	83
Data Preparation	84
Statistical Analyses Procedure	85
Score Reliability	86
Tests for normality	87
Internal Consistency	88
Correlational Analysis	89
Evaluation of Therapist Differences	89
The Temporal Nature of Adherence and Competence	91
CHAPTER 8	
Study One Results	93

Overview	93
Session characteristics	93
Score Reliability of HAACS	
Reliability of the Adherence Scores for the HAACS	96
Reliability of the Competence Scores for the HAACS	101
Reliability of Ratings for Other Measures of Therapist	104
Adherence and Competence	
Tests for Normality	104
Internal Consistency of the HAACS using Item Analysis	106
Correlational Analysis	109
Evaluation of Therapist Differences	111
The Temporal Nature of Adherence and Competence	115
CHAPTER 9	
Discussion Study One	119
Overview	119
Reliability	119
Internal consistency	123
Correlational Analysis	124
Evaluation of Therapist Differences	126
Evaluation of Therapist Differences The Temporal Nature of Adherence and Competence	126 127
The Temporal Nature of Adherence and Competence	
The Temporal Nature of Adherence and Competence CHAPTER 10	127
The Temporal Nature of Adherence and Competence CHAPTER 10 Method Study Two	127

Assignment Compliance Rating Scale	132
Procedure	132
Data Analysis Procedures	
Score Reliability	133
Correlational Analysis	133
Factor Analysis	134
Variability in Client Homework Completion	136
CHAPTER 11	
Study Two Results	137
Overview	137
Assessment of Missing Values	137
Session characteristics	139
Score Reliability	139
Assessment of Normality	142
Correlational Analysis	144
Factor Analysis of HRS-II	148
Comparison of Factor Analysis Results	153
Variability in Client Homework Completion	156
CHAPTER 12	
Discussion Study Two	163
Overview	163
Score Reliability	164
Correlational Analysis	165
Factor Analysis	167

Variability in Client Homework Completion	169
CHAPTER 13	
General Discussion and Conclusions	171
Limitations	171
Recommendations for Future Research	174
Clinical Implications	175
Conclusion	177
REFERENCES	179
APPENDIX A Homework Adherence and Competence Scale	205
APPENDIX B Therapist Adherence and Competence Scale	231
APPENDIX C Cognitive Therapy Scale	233
APPENDIX D Homework Rating Scale-II	241
APPENDIX E Assignment Compliance Rating Scale	243
APPENDIX F Multiple Regression Analysis – HAACS Adherence	245
APPENDIX G Equations for Bland-Altman Procedure	249
APPENDIX H Pearson's r Correlation Matrix for HRS-II Scores	251
APPENDIX I Scree Plot and Unrotated Loadings for HRS-II	959
Factor Analysis	253

LIST OF TABLES

Table 1	Adherence items of the Homework Adherence and Competence Scale	80
Table 2	Frequency of therapist representation in the sample	94
Table 3	Rater by Rater Cross-Tabulation for HAACS Adherence Items	95
Table 4	Percent Between - Rater Agreement for HAACS Adherence Ratings	
		95
Table 5	Frequencies of Adherence Behaviours and Rater Agreement for	
	HAACS Review Section	97
Table 6	Frequency of Adherence Behaviours and Rater Agreement for	
	HAACS Design Section	98
Table 7	Frequency of Adherence Behaviours and Rater Agreement for	
	HAACS Assign Section	100
Table 8	Intraclass correlation coefficients for HAACS Competence Ratings	102
Table 9	Means, Standard Deviations, Minimum and Maximum Scores for	
	Therapist Skill Ratings of Sample Sessions	106
Table 10	Item-total Correlations Between HAACS Adherence Items and the	
	Other HAACS Sections	108
Table 11	Correlation Matrix for Measures of Therapist Adherence and	
	Competence Variables	111
Table 12	Mean Scores and Standard Deviations for Measures of Adherence	
	and Competence as a Function of Therapist	112
Table 13	Frequency of Sessions from Three Phases of Therapy	115
Table 14	Means and Standard Deviations of HAACS Adherence and	116

	Competence Behaviours Over the Phases of Therapy	
Table 15	Corerelation Matrix of HAACS Review, Design and Assign Sections	
	for Adherence and Competence	117
Table 16	Therapist and client factors for the HRS-II identified in previous	
	research	130
Table 17	Frequency distribution of therapist	139
Table 18	Intraclass Correlation Coefficients (ICC) for Items on the HRS-II	
	and ACRS	140
Table 19	Percent Agreement Between Raters Based on Absolute and Within	
	1-Point Agreement	142
Table 20	Mean Item and Scale totals showing Range, Mean, Standard	
	Deviations and Variance for HRS-II and ACRS	144
Table 21	Correlation Matrix of HRS-II Items, HRS-II Total Score and	
	ACRS Scores	146
Table 22	Summary of items and factor loading for Varimax Rotation Solution	
	for HRS-II	151
Table 23	Comparison of Factor Analyses based on Independent Observer,	
	Therapist and Client Ratings of HRS-II.	154
Table 24	Means and Standard Deviations of Client Homework Completion	
	Across Therapy Phases	157
Table 25	Prediction of HAACS AI Scores Using Mean Adherence Item	
	Ratings on the HAACS based on Multiple Regression Analysis	248
Table 26	Correlation Matrix of HRS-II items using Pearson's r	252
Table 27	Component Matrix HRS-II	254
Table 28	Total Variance Explained by Eigenvalues	254

LIST OF FIGURES

Figure 1.	Integrated cognitive and behavioural model of homework	
	completion	32
Figure 2.	Cyclical process for recommending homework (Kazantzis,	
	MacEwen & Datillio, 2005). Used with permission.	37
Figure 3.	Therapist Quick Reference- Adapted for Rating the HAACS	53
Figure 4.	Bland-Altman plot for the difference between percent scores for	
	the Homework Rating Scale-II and the Assignment Completion	
	Rating Scale versus the magnitude of the percentage scores for	
	the average of the two measures.	148
Figure 5.	Independent observer ratings of client homework beliefs across	
	phases of therapy.	159
Figure 6.	Independent observer ratings of client homework obstacles	
	across phases of therapy.	159
Figure 7.	Independent observer ratings of client homework behaviours	
	across phases of therapy.	160
Figure 8.	Independent observer ratings of client homework consequences	
	across phases of therapy.	160
Figure 9.	Independent observer ratings of client homework synthesis	
	across phases of therapy.	161
Figure 10.	Scree plot of factor analysis for HRS-II.	255