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An Investigation into the Presence of Seasonal Symptoms in a
Sample Treated for Depression

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Abstract

The “winter blues” would appear to be a global concept. This thesis examined features of depression, seasonal change and meteorological data in relation to theories on the development of seasonal depression and Seasonal Affective Disorder (SAD). It reviewed the neurotransmitter based theories of causation where increased exposure to light is thought to stimulate normal neurotransmitter production. It also examined the dual vulnerability hypothesis (DVH) which postulated that vegetative symptoms arose from a different vulnerability than depressive symptoms. Levels of vegetative symptoms and depression were analysed in relation to the different climate experienced in Auckland, New Zealand. Three studies were undertaken. In the first study, the sample consisted of 195 individuals in New Zealand who self-referred to participate in a separate research project examining the effects of “homework” and cognitive behavioural therapy for first time depression. Meteorological data were investigated in order to explore any potential vulnerability to seasonal depression in this sample. Additionally, age and gender were explored in relation to season of presentation. The second study involved the subsample ($n = 81$) who were assessed for therapy and examined season and symptom profile in relation to when the person presented. The third study traced the progress through therapy of 28 adults who were selected from the second study for CBT. The Beck Depression Inventory (BDI-II) provided additional data to test the related hypotheses. Rate of change in depression scores and symptom expression in relation to seasonality were analysed using multilevel modelling (MLM). Daily hours of bright sunlight was found to have an unusual relationship to temperature in New Zealand when compared with previous research. In this setting increased sunshine was associated with lower temperatures. Therefore, the variables were separated in order to ascertain whether one affected results more than others. Bright sunshine hours affected the expression of vegetative symptoms with a decrease observed over time in relation to increased photoperiod. Subtle relationships between temperature and vegetative symptoms were observed. However, there was an overall lack of correlation between vegetative and depressive symptoms observed in the CBT sample, and sunlight was not observed to have any effect on typical depressive symptoms. The investigation provided partial support for the neurotransmitter basis of vegetative symptoms and for the dual vulnerability hypothesis. Gender and age were correlated with vegetative symptom endorsement, although over time only gender was found to have any ongoing significance in the presentation of seasonal symptoms with women more likely to exhibit vegetative responses over time.

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Contents

Abstract.....	ii
Acknowledgements.....	iii
Contents.....	iv
List of Tables.....	vi
List of Figures.....	vii
List of Appendices.....	viii
Chapter One: Introduction.....	1
Chapter Two: Diagnostic Considerations, Risk Factors and Symptoms of Seasonal Depression.....	6
• Physical and Cognitive Symptoms associated with Seasonal Depression.....	13
• Risk Factors.....	20
• The Debate over the Diagnosis of Seasonal Depression.....	30
Chapter Three: The Theoretical Basis and Treatments for Seasonal Depression.....	35
• Specific Biological theories around the development of seasonal depression.....	37
• Cognitive Theories of Depression and Seasonal Depression.....	45
• Treatment for Seasonal Depression.....	49
Chapter Four: Summary and Overview of Studies.....	62
Chapter Five: Study One.....	67
• Method.....	67
• Results.....	70
• Discussion.....	72
Chapter Six: Study Two.....	78
• Method.....	79

• Results.....	83
• Discussion.....	87
Chapter Seven: Study Three.....	95
• Method.....	98
• Results.....	114
• Discussion of results.....	136
Chapter Eight: Final Discussion	142
References.....	160
Appendices.....	182

List of Tables

Table 1: <i>Correlation between Weather Variables and Age (N = 194)</i>	71
Table 2: <i>Comparisons of Previous Episodes, Current Medication, Season, Age and Weather Variables by Gender (N = 194)</i>	72
Table 3: <i>Age and Meteorological Associations with Depression and Vegetative Symptom Endorsement (N = 81)</i>	86
Table 4: <i>Comparisons of Men’s and Women’s Correlations on Temperature, Sunshine Hours, Depressive and Vegetative Symptom Endorsement (N = 81)</i>	87
Table 5: <i>Relationships between Vegetative Symptoms, Irritability, Meteorological Symptoms, BDI-II (BDI) scores and Change in BDI-II (chBDI) over 235 Measurement Occasions (N = 28)</i>	115
Table 6: <i>Correlations on the Effects of Initial Status, Rate of Change and Age on BDI-II Scores (N = 28)</i>	117
Table 7: <i>Model Building for Change in BDI-II score: Model A with Alternate Time Variables for Model B using “Session” and “Months” (N = 28)</i>	127
Table 8: <i>Final Model for Change in Depression Scores (N = 28)</i>	131
Table 9: <i>Final Model for Change in Vegetative Symptoms (N = 28)</i>	135

List of Figures

<i>Figure 1: Visual Map of Studies</i>	64
<i>Figure 2: Individual trajectories of change in BDI-II scores over sessions (N = 28)</i>	118
<i>Figure 3: Normal P-Plot of Regression Standardised Residuals over time for BDI-II Scores</i>	119
<i>Figure 4: Regression Standardized Residual Scatterplot of BDI-II scores over time</i>	120
<i>Figure 5: Individual trajectories of change in vegetative symptoms over Time (N = 28)</i>	121
<i>Figure 6: Normal P-Plot of Regression Standardised Residuals over time for Vegetative scores over months.</i>	123
<i>Figure 7: Regression Standardized Residual Scatterplot of Vegetative scores over months</i>	123
<i>Figure 8: Changes in BDI-II scores in relation to season of therapy</i>	124
<i>Figure 9: Season of presentation and change in BDI-II scores over time</i>	125
<i>Figure 10: Visual Map of Studies with supported hypotheses</i>	147

List of Appendices

Appendix A: Massey University Press Release.....	182
Appendix B: Participant Information Sheet and Consent Form	183
Appendix C: List of Hypotheses.....	187
Appendix D: Weather Variable Graph	189
Appendix E: Telephone Screening Interview and Protocol	191
Appendix F: Demographic and Personal Data Form	206
Appendix G: Normal P-Plots and Residual Graphs	209
Appendix H: Reliability Analysis for BDI-II	213
Appendix I: Correlations for BDI-II	214
Appendix J: Syntax for Model Building	215
Appendix K: Tables Displaying Model Building for Depression Score Change	216
Appendix L: Tables Displaying Model Building for Vegetative Symptom Change....	219