

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.

**COGNITIVE DETERMINANTS OF  
TREATMENT CHOICE AMONG  
CANCER PATIENTS**

**A thesis presented in partial fulfilment of the requirements  
for the degree of Doctor of Philosophy in Psychology  
at Massey University**

**Glen Leonard Haddon**

**2001**

## ABSTRACT

Decisions about whether or not to include non-conventional therapies in a cancer treatment regimen are potentially critical. An illness such as cancer, perceived to be life-threatening, inevitably raises existential questions which, in the present study, were posited to underlie the cognitive approach to treatment choice for cancer patients. The hypotheses tested in the study were that those who use non-conventional medicine will be more knowledgeable and have a more positive belief system about cancer, will be more interested in and motivated about health matters, will desire more personal control and assume more responsibility for their health and its treatment, and will be more intrinsically oriented in terms of meaning in illness and life. It was further hypothesised that the differences between those who use only conventional treatments and those who include non-conventional treatments will become more marked as the boundary between the two is altered to incorporate more non-conventional treatments in the conventional category, suggesting that patients' perceptions of the distinction varies from the medical establishment's view. An important underlying objective of the study included the exploration of the conceptualisation of meaning in life and its events in terms of intrinsic and extrinsic orientations. 212 adult participants, all having been diagnosed with any form of cancer for at least three months, volunteered and completed a postal survey.

Overall, the results indicated that the conceptualisation of meaning as intrinsically or extrinsically oriented was an appropriate basis for exploring the role of existential issues in treatment decision making. The combination of constructs in the study was also confirmed as appropriate. In terms of the specific hypotheses, the expectation that users of non-conventional medicine would be more knowledgeable and more positive in their beliefs about cancer was supported only when conventional treatment was deemed to include certain physical and natural types of treatment usually labelled as non-conventional. Users of non-conventional medicine were found to be more interested in and more motivated to be involved in health matters than those who used only

conventional medicine. They were also found to be those who desired more personal control over their health and its treatment and were also prepared to assume more responsibility. The results also supported the hypothesised difference between conventional only and non-conventional users in terms of intrinsic life meaning, but results for extrinsic life meaning only partially supported the expectation that this would be associated with conventional medicine use. These were discussed in terms of measurement issues and the reconceptualisation of the religious, spiritual and philosophical derivations of extrinsic meaning. No difference was found between users of conventional only and users of non-conventional medicine in terms of illness meaning, suggesting that conceptualisation in intrinsic and extrinsic terms was inappropriate for this sub-construct. There was also support for the view that treatments are viewed by many as being on a continuum from conventional to non-conventional, rather than being in defined dichotomous groups.

Multivariate results (from a series of 2-group discriminant analyses) confirmed that health interest and motivation, attributions of control, responsibility and blame, and intrinsic and extrinsic meaning in life were the most important contributors to discrimination. Internal control attributions were consistently the most important relative discriminator. These results also showed that the influence of the discriminating variables in combination, including sociodemographic control variables, explained variances ranging from 25.4% to 33.6% across the altered groupings of treatment type.

The results are discussed in relation to the conceptualisation of meaning and attributions of control and responsibility as pivotal concepts, and in relation to the indication that the greatest separation between conventional and non-conventional use was found when certain physical and natural treatments were classified as conventional rather than non-conventional. Psychometric, and conceptual limitations of the study are discussed, suggestions for future research are made, and some applications of the findings for health professionals are offered.

## ACKNOWLEDGMENTS

I extend my sincere thanks to my supervisors. My chief supervisor, Associate Professor Kerry Chamberlain's extensive knowledge and experience in the diverse area of health psychology and in research in psychology in general was invaluable.

Associate Professor John Spicer's research skills and particularly his ability to identify statistical issues and impart his knowledge in this area clearly and concisely contributed significantly to the learning process during this project.

I also sincerely thank my family and friends for the considerable space they gave me to carry out the research and complete this dissertation.

Finally, I am indebted to the many participants who gave much of themselves in contributing to this study. Some, indeed, have passed away after their battle with cancer, and without hearing of the findings of the study.

# TABLE OF CONTENTS

	PAGE
<b>Abstract.....</b>	<b>ii</b>
<b>Acknowledgments.....</b>	<b>iv</b>
<b>Table of Contents.....</b>	<b>v</b>
<b>List of Tables.....</b>	<b>xi</b>
<b>List of Figures.....</b>	<b>xiv</b>
 <b>Chapter 1 Introduction.....</b>	 <b>1</b>
Broad objectives of the research.....	1
The treatment choice process.....	4
The nature of the choice.....	6
Understanding the basis of treatment choice is important.....	6
Terminology.....	9
Thesis structure.....	10
 <b>Chapter 2 Cancer and its Treatment.....</b>	 <b>11</b>
The nature of the disease.....	11
Cancer prevalence.....	12
Conventional cancer treatment.....	12
Conventional medicine advances in detection and treatment....	15
Treatment alternatives.....	16
Prevalence of non-conventional treatment use.....	17
Some factors underlying the choice of treatments.....	17
Treatment choice research.....	20

### **Chapter 3 The Cognitive Approach in Health Behaviour**

<b>Research.....</b>	<b>24</b>
Health behaviour defined.....	24
Justification for a cognitive approach.....	25
The social cognition approach.....	28
Social cognition models.....	31
The social and cultural aspects of cognition.....	38
Affect as a potential determinant of health-related behaviour...	41

### **Chapter 4 Theoretical Foundations of the Cognitive Approach**

<b>Adopted in this Study.....</b>	<b>46</b>
Conceptual framework.....	46
Attribution theory as an underlying theoretical perspective.....	51
Control and meaning as separate but related constructs.....	57
Meaning.....	60
Meaning as a construct in health behaviour research.....	60
Spirituality and religion in the intrinsic/extrinsic paradigm.....	64
The literature has focussed on an intrinsic approach.....	67
Justification for a philosophical approach.....	70
Meaning and treatment choice.....	75

### **Chapter 5 A Cognitive Approach to Understanding Treatment**

<b>Choice.....</b>	<b>78</b>
The beginnings of a cognitive approach to understanding treatment choice.....	78
Cognitions as treatment choice determinants.....	80
Treatment choice.....	84
Knowledge and understanding of cancer.....	90
Approach to health.....	93

Health interest and motivation.....	94
Biomedical versus biopsychosocial orientation.....	98
Optimism.....	101
Attributions of control, responsibility and blame.....	103
Meaning.....	107
Meaning in illness.....	108
Meaning in life.....	110
<b>Chapter 6 Objectives and Expectations.....</b>	<b>112</b>
Objectives.....	112
Expected relationships among the constructs and their components.....	113
Relationships among discriminating variables.....	113
Bivariate relationships between discriminating variables and treatment choice.....	117
Research questions and hypotheses.....	119
<b>Chapter 7 Method.....</b>	<b>121</b>
Design and chapter overview.....	121
Participants.....	121
Demographic details of participants.....	123
Procedure.....	127
Questionnaire.....	128
1) Knowledge and understanding of cancer.....	128
2) Approach to health.....	133
Health interest and motivation.....	133
Biomedical versus biopsychosocial orientation...	135
Optimism.....	136
3) Attributions of control, responsibilities and blame.....	137



4)	Meaning.....	139
	Intrinsic illness meaning.....	140
	Extrinsic illness meaning.....	142
	Intrinsic life meaning.....	144
	Extrinsic life meaning.....	146
5)	Treatment.....	149
	Data analysis.....	154
	Ethics.....	155

## **Chapter 8 The Health-Related Cognitions Of Cancer**

	<b>Patients.....</b>	<b>156</b>
	Univariate characteristics of the sample.....	156
	Knowledge and understanding of cancer.....	156
	Approach to health.....	157
	Attributions of control, responsibility and blame.....	158
	Meaning.....	158
	Relationships among discriminating variables.....	161
	Relationships within constructs.....	162
	Relationships between constructs.....	167
	Overall summary.....	174

## **Chapter 9 Cognitions And Treatment Choice..... 177**

	A preliminary picture of the cognitive determinants of	
	treatment choice.....	178
	Knowledge and understanding of cancer.....	178
	Approach to health.....	179
	Attributions of control, responsibility and blame.....	180
	Meaning.....	184
	Demographic aspects.....	187
	Summary.....	189

The influence on treatment choice of the set of health-related cognitions.....	192
Analytic strategy and preliminary steps.....	192
Treatment grouping 1.....	195
Treatment grouping 2.....	200
Treatment grouping 3.....	204
Treatment grouping 4.....	209
Significant discriminator subset analyses.....	212
<b>Chapter 10 Discussion.....</b>	<b>215</b>
Summary of findings.....	215
The conceptual integrity of the constructs comprised in the study.....	217
Knowledge and understanding of cancer.....	217
Approach to health.....	219
Attributions of control, responsibility and blame.....	221
Meaning.....	224
Summary.....	228
Choosing whether to use non-conventional treatment for cancer.....	229
Demographic influences on treatment choice.....	230
Knowledge and understanding of cancer.....	233
Approach to health.....	234
Attributions of control, responsibility and blame.....	238
Meaning.....	242
What is conventional and what is non-conventional - the treatment groupings.....	249
The combined influence of the constructs summarised.....	252
Limitations, directions for future research and applications.....	253
A concluding comment.....	263

<b>References.....</b>	<b>265</b>
<b>Appendix A.....</b>	<b>308</b>
<b>Appendix B.....</b>	<b>328</b>
<b>Appendix C.....</b>	<b>334</b>
<b>Appendix D.....</b>	<b>336</b>

## LIST OF TABLES

TABLE		PAGE
1	Demographic details.....	124
2	Cancer types reported.....	127
3	Summary of constructs and associated measures.....	130
4	Therapies used as reported by participants.....	150
5	Classification of treatments.....	152
6	Make up of treatment classes.....	153
7	Configuration of the 4 treatment groupings.....	154
8	Intercorrelations among approach to health variables....	163
9	Intercorrelations among components of attributions of control, responsibility and blame construct.....	164
10	Intercorrelations among life and illness meaning variables.....	165

<b>11</b>	Intercorrelations between knowledge and approach to health, attributions of control, responsibility and blame, life meaning, and illness meaning.....	168
<b>12</b>	Intercorrelations between health approach variables and control and meaning.....	169
<b>13</b>	Intercorrelations between intrinsicness / extrinsicness components and control.....	172
<b>14</b>	Means and F levels between conventional and non-conventional group on each treatment grouping on knowledge and understanding of cancer.....	179
<b>15</b>	Means and F levels between conventional and non-conventional groups on each treatment grouping on health approach variables.....	181
<b>16</b>	Means and F levels between conventional and non-conventional groups for each treatment grouping on attributions of control, responsibility and blame.....	182
<b>17</b>	Means and F levels between conventional and non-conventional groups for each treatment grouping on intrinsic and extrinsic illness and life meaning.....	186
<b>18</b>	Standardised canonical discriminant function coefficients for treatment grouping 1.....	196

<b>19</b>	Pooled within-group correlations between discriminating variables and the canonical discriminant function (structure matrix) for treatment grouping.....	198
<b>20</b>	Standardised canonical discriminant coefficients for treatment grouping 2.....	201
<b>21</b>	Pooled within-groups correlations between discriminating variables and canonical discriminant function (structure matrix) for treatment grouping 2.....	203
<b>22</b>	Standardised canonical discriminant function coefficients for treatment grouping 3.....	206
<b>23</b>	Pooled within-groups correlations between discriminating variables and discriminant function (structure matrix) for treatment grouping 3.....	207
<b>24</b>	Standardised canonical discriminant function coefficients for treatment grouping 4.....	210
<b>25</b>	Pooled within-groups correlations between discriminating variables and discriminant function (structure matrix) for treatment grouping 4.....	211

## LIST OF FIGURES

<b>FIGURE</b>		<b>PAGE</b>
<b>1</b>	A process towards treatment choice.....	<b>5</b>
<b>2</b>	Education level by treatment grouping.....	<b>190</b>