

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 RELATIONSHIP OF OCCUPATIONAL STRESS AND  
PERSONAL TYPOLOGIES AT DIFFERENT PHASES OF  
ORGANISATIONAL RENEWAL.**

A thesis submitted in partial fulfilment of requirements  
for the degree of Master of Arts in Psychology at Massey University, Albany,  
New Zealand.

Tania Henning  
2001

**Abstract**

One of the difficult questions that has only been hinted at so far in research concerns the reason why the stress-illness relationship manifests itself in such different forms in different individuals. Sources of pressure at work evoke different reactions from different people.

Most of the research in the past has focused on personality and behavioural differences between high and low stressed individuals. Studies done until now were concerned mainly with the differences between Type A and Type B personalities and the relationship with stress. There are predictions on the stress reactions of different MBTI types but not much on what causes the stress (Dean, 1997). In addition, little has been done to study the Myers-Briggs Type Indicator (MBTI) and the relationship with occupational stress in a restructuring environment.

Hurst, Rush & White (1991) have attempted to point out the importance of studying individual differences within the management team. They proposed a Creative Management (CM) model as an extension of the Strategic Management (SM) model to include the relationship of the Myers-Briggs personality typologies (MBTI) to different phases of organisational renewal. Individuals with specific typologies prefer one phase of renewal to another. In the present study, the relationship of personal typologies and occupational stress at different stages of organisational renewal were examined.

A questionnaire consisting of the Eysenck Personality Questionnaire (Revised) (EPQ-R), the MBTI, the Occupational Stress Inventory (OSI) and some demographical questions was completed by 130 respondents from different organisations, mostly managers. It was hypothesised that occupational stress is different for the different functioning phases of the CM model and, according to the personality type there is an ideal functioning phase. Individuals operating in ideal functioning phases should have less stress. It was found that there were some differences in occupational stress between functioning phases of the management model but there was no clear relationship between stress and ideal or non-ideal functioning levels for individuals.

The findings were discussed in terms of the CM model and directions for future research.

## **Acknowledgements**

The author would like to express grateful appreciation to the following people and authorities:

The Human Ethics Committee for granting approval and permission for conducting this survey.

The institutions who participated in this research including Massey University, HTC Infrastructure Management, Transit New Zealand, Health Care Hawkes Bay, Audit New Zealand, Westpac Trust, Hastings District Council, Bloxam, Burnett and Oliver Consulting Engineers, EIT College Napier, Deloitte Touche Tohmatsu and Air New Zealand.

The participants who took part in this research. Without them, this research would not have been possible.

Dr Clarke for the initial ideas and discussions on the topic and for his guidance and assistance during this study.

Theuns Henning who developed the database.

Charl Crous for making available to me his personal notes on new leadership and organisations.

To my husband, my family and special friends for encouraging and supporting me during this study.

# Table of Contents

<b>1. INTRODUCTION .....</b>	<b>1</b>
1.1 Background.....	1
1.2 The Rationale and Objective of the Study.....	2
1.3 Importance of the Study.....	4
<b>2. LITERATURE REVIEW .....</b>	<b>6</b>
2.1 Organisational Change and Renewal .....	6
2.1.1 The Social-Cognitive Learning Theory.....	7
2.1.2 Salutogenic Strengths.....	7
2.2 Models of Management .....	8
2.2.1 Strategic Management (SM) Model.....	8
2.2.2 The Creative Management (CM) Model .....	10
2.3 Personality and Individual Differences.....	14
2.4 Models of Personality.....	15
2.5 Assessment of Personality.....	16
2.5.1 Eysenck Personality Questionnaire (EPQ) .....	16
2.5.2 Myers-Briggs Type Indicator (MBTI).....	18
2.6 Occupational Stress.....	20
2.6.1 Sources of Stress .....	22
2.7 Models of Occupational Stress .....	24
2.7.1 Stimulus Models .....	25
2.7.2 Response Models .....	26
2.7.3 Transaction Models .....	27
2.8 Assessment of Occupational Stress .....	29
2.8.1 The Occupational Stress Indicator (OSI).....	30
2.9 Personality and Stress.....	30
2.9.1 Locus Of Control.....	31
2.9.2 Hardiness .....	31
2.9.3 Type A Behaviour .....	31
2.9.4 Neuroticism.....	32
2.9.5 Dispositional Optimism .....	32
2.10 Management Models, Personality, Stress and Coping .....	33
2.11 Problems in the Study of Personality, Coping and Stress.....	36
2.12 Summary .....	36
2.12.1 Hypotheses.....	39
<b>3. RESEARCH METHODOLOGY .....</b>	<b>46</b>
3.1 Introduction .....	46
3.2 The Participants.....	46
3.3 Method.....	48

3.3.1	Factorial Design.....	48
3.3.2	Procedures of Data Collection.....	49
3.4	Data Processing.....	52
3.4.1	Data Capturing in Electronic Format (Input forms).....	53
3.4.2	Data Storing in Electronic Format (data tables).....	54
3.4.3	Data Combination and Export facilities.....	54
<b>4.</b>	<b>DATA ANALYSIS AND RESULTS.....</b>	<b>55</b>
4.1	Descriptive Statistics.....	55
4.1.1	Statistics for Occupational Stress Inventory (OSI).....	56
4.1.2	Statistics for Myers and Briggs Type Indicator (MBTI) Data.....	58
4.1.3	Statistics for the Eysenck Personality Questionnaire (EPQ-R).....	60
4.2	ANOVA Analyses.....	62
4.3	Regression Analysis.....	63
4.3.1	The Relationship Between Personality (MBTI) and Stress (OSI).....	63
4.3.2	Relationship of EPQ-R and Stress (OSI).....	71
<b>5.</b>	<b>DISCUSSION AND CONCLUSIONS.....</b>	<b>75</b>
5.1	Introduction.....	75
5.2	Hypotheses Testing.....	75
5.2.1	First Set of Hypotheses.....	75
5.2.2	Second Set of Hypotheses.....	78
5.3	Demographical Information.....	78
5.4	MBTI Personality Types in the Sample.....	80
5.5	EPQ-R Personality Traits in the Sample.....	81
5.6	Mean Statistics for the OSI.....	83
5.7	ANOVA Analyses.....	86
5.8	Regression Analysis.....	87
5.8.1	The Relationship Between Demographical Variables and MBTI with Stress (OSI).....	87
5.8.2	Relationship of the MBTI and Stress (OSI).....	88
5.8.3	Relationship of the EPQ-R and Stress (OSI).....	89
5.8.4	Relationship of Functioning Levels and Stress (OSI).....	90
5.8.5	Comparing Results of MBTI and Eysenck.....	92
5.9	Summary.....	93
5.10	Limitations of the Study.....	95
5.11	Specific Applications.....	95
5.12	Further Research Work.....	96
<b>APPENDIX A</b>	<b>INFORMATION SHEETS &amp; QUESTIONNAIRES.....</b>	<b>106</b>
<b>APPENDIX B</b>	<b>DESCRIPTIVE STATISTICS OF OSI.....</b>	<b>116</b>
<b>APPENDIX C</b>	<b>ANOVA ANALYSES RESULTS.....</b>	<b>118</b>



## LIST OF TABLES

Table 1. Key characteristics of five theoretical traditions in psychology, .....	15
Table 2: Major factors of Jung's typology, as operationalised by Myers-Briggs Type Indicator (MBTI), .....	19
Table 3. Four approaches to occupational stress .....	22
Table 4. Sources of stress .....	23
Table 5: Functioning levels in the CM model with possible factors that could contribute towards stress of the individuals .....	39
Table 6: The factors that could influence stress related to the MBTI personality types and the CM functioning levels .....	41
Table 7. Summary distribution of respondents in study.....	47
Table 8. Factorial design for the research (n = 130) .....	49
Table 9. Descriptive statistics for the OSI test.....	57
Table 10. Mean and standard deviations for men and women on the OSI .....	57
Table 11. Mean and standard deviations for managers and non-managers on the OSI.....	58
Table 12. Descriptive statistics for MBTI data .....	59
Table 13. Comparing MBTI statistic for men and women .....	60
Table 14. Comparing MBTI statistic for managers and non-managers .....	60
Table 15 Statistics for the EPQ-R (N=94) .....	61
Table 16. Comparing men and women for the EPQ-R.....	61
Table 17. Comparing management and non-management statistics for the EPQ-R ..	62
Table 18: Personalities distribution within different phases of this study.....	65
Table 19. Summary of regression analysis for the total OSI relationships as a function of MBTI.....	66
Table 20. Summary of regression analysis for the OSI relationships as a function of MBTI .....	66
Table 21. Significant factors for different functioning levels and stress (OSI), according to the Pearson statistics .....	68
Table 22. Summary of significant factors for the functioning phases on the ORQ, according to the Pearson statistics .....	69



Table 23. Summary of regression analysis for the ORQ Subscales relationships as a function of MBTI.....	70
Table 24. Summary of regression analysis for the OSI relationships as a function of EPQ-R.....	72
Table 25. Summary of regression analysis for the ORQ relationships as a function of EPQ-R for different functioning phases.....	73
Table 26. Summary of regression analysis for the OSI sub-scale relationships as a function of EPQ-R .....	74
Table 27: Functioning levels in the CM model, possible factors that could contribute towards stress of the individuals and actual research findings....	76

## List of Figures

Figure 1. The Strategic Management (SM) Model. ....	9
Figure 2. The Creative Management (CM) Model.....	11
Figure 3. Mental mapping of personality profiles.....	12
Figure 4. Mental mapping of personality profiles integrated with the Creative Management Model .....	14
Figure 5. Relationship of extraversion/introversion and neuroticism/stability to earlier personality schemes. ....	18
Figure 6. Dynamics of work stress and clinical conditions. ....	23
Figure 7. Stimulus and response models of stress .....	26
Figure 8. The General Adaptation Syndrome.....	27
Figure 9. An outline of a theory about how occupational stress affects individual strains contributing to heart disease .....	28
Figure 10. Age distribution of respondents participating in study.....	46
Figure 11: Occupational summary of respondents.....	47
Figure 12: Summary of qualification distribution amongst respondents.....	48
Figure 13. Structure of the database used for the study.....	53
Figure 14. Demographical input form used in the database.....	54
Figure 15: Distribution of functioning phases for respondents.....	55
Figure 16: Comparison of functioning phases between management and non- management.....	56
Figure 17. A distribution of MBTI types for the sample.....	59
Figure 18: Significant factors of different functioning phases and the influence on the occupational stress relation .....	91