

**OCCUPATIONAL WELLBEING TYPES IN THE HEALTH CARE INDUSTRY IN
SOUTH AFRICA**

by

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DECLARATION

I, Ciara Bux, student number 48447196, hereby declare that this thesis entitled “**Occupational well-being types in the health care industry in South Africa**” is my own work and that all the sources that I have used and quoted have been indicated and acknowledged by means of a complete list of references. I declare that I submitted the thesis to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.



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4 December 2020

DATE

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ABSTRACT

OCCUPATIONAL WELLBEING TYPES IN THE HEALTH CARE INDUSTRY IN SOUTH AFRICA

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The context of this research is the occupational wellbeing of employees in the healthcare industry in South Africa. The purpose of this study was to identify occupational wellbeing types that cluster as a result of variables (burnout, work engagement, workaholism and job satisfaction) which can be plotted on the circumplex model of wellbeing, and determining the extent of type differences in as far as it pertains to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), as well as positive and negative outcome variables (comprising organisational commitment and turnover intention). A quantitative survey was conducted on a convenience sample of healthcare workers (N = 461). The population consisted of predominately black African females, aged between 31 and 45 from the nursing profession.

Cluster analysis using k-means found statistically significant support for three occupational wellbeing types, namely, Exhausted, Engaged and Burned-Out. Results from MANOVA revealed a difference between all occupational wellbeing types and the psychosocial antecedent variables of job demands, job resources and work-related sense of coherence. The occupational wellbeing types did not however differ, based on the age of the participants. Multinomial logistic regression analysis revealed that age was additionally not a significant predictor of the occupational wellbeing types, whilst Work-SoC predicted the engaged type, and job demands and job resources predicted the engaged and exhausted types in comparison to the burned-out type. Hierarchical moderated regression analysis concluded that each of the occupational wellbeing types played a significant role by moderating the relationship between the psychosocial antecedent variables of job resources and work-related sense of coherence, and the positive and negative outcomes of organisational commitment and turnover intention.

Theoretically the study highlighted the importance of addressing the occupational wellbeing concerns and challenges faced by healthcare employees in South Africa face. The empirical value of the study was the identification of the occupational wellbeing types and a potential nomological net. The knowledge derived from the relationship between the variables may be valuable in informing a holistic affective wellbeing model which could direct practices within the healthcare industry in South Africa.

Keywords: occupational wellbeing, exhausted, engaged, burned-out, workaholism, age, job demands, job resources, work-related sense of coherence, organisational commitment, turnover intention.

TABLE OF CONTENTS

DECLARATION	ii
ACKNOWLEDGMENTS	iii
DEDICATION	iv
ABSTRACT	v
TABLE OF CONTENTS	vii
CHAPTER 1	
SCIENTIFIC OVERVIEW OF THE STUDY	1
1.1 BACKGROUND AND RATIONALE FOR THE RESEARCH	1
1.2 PROBLEM STATEMENT	7
1.2.1 Research Questions Relating to the Literature Review	11
1.2.2 Research Questions Relating to the Empirical Study.....	11
1.3 AIMS OF THE RESEARCH.....	12
1.3.1 Specific Aims Relating to the Literature Review	12
1.3.2 Specific Aims Relating to the Empirical Study.....	13
1.4 STATEMENT OF SIGNIFICANCE.....	14
1.4.1 Potential Contribution on a Theoretical Level	14
1.4.2 Potential Contribution on a Practical Level	15
1.5 THE RESEARCH MODEL.....	15
1.6 PARADIGM PERSPECTIVE OF THE RESEARCH	16
1.6.1 The Intellectual Climate	16
<i>1.6.1.1 The Disciplinary Perspective.....</i>	<i>16</i>
<i>1.6.1.2 Meta-theoretical Assumptions.....</i>	<i>18</i>
<i>1.6.1.2.1 Literature Review</i>	<i>18</i>
<i>1.6.1.2.2 Empirical Study.....</i>	<i>20</i>
1.6.2 Market of Intellectual Resources.....	21
<i>1.6.2.1 Theoretical Beliefs.....</i>	<i>21</i>
1.7 RESEARCH APPROACH.....	25
1.7.1 Descriptive Research.....	25
1.7.2 The Unit of Research.....	25

1.7.3	The Variables	25
1.7.4	Delimitations	26
1.8	RESEARCH METHOD	26
1.8.1	Phase 1: Literature Review	26
1.8.2	Phase 2: Empirical Study	28
1.9	CHAPTER LAYOUT	30
1.10	CHAPTER SUMMARY	30

CHAPTER 2

	OCCUPATIONAL WELLBEING IN THE HEALTHCARE INDUSTRY IN SOUTH AFRICA	31
2.1	THE HEALTHCARE INDUSTRY OF SOUTH AFRICA IN CONTEXT	31
2.1.1	Human Resources Challenges and Employee Retention	33
2.1.2	The Burden of Disease	36
2.1.3	Infrastructure and Resource Challenges	38
2.1.4	Increased Patient Load	39
2.1.5	Other Contributing Factors Posing Challenges to the Healthcare Industry	40
2.2	IMPLICATIONS FOR THE OCCUPATIONAL WELLBEING OF EMPLOYEES IN THE HEALTHCARE INDUSTRY	42
2.3	CHAPTER SUMMARY	44

CHAPTER 3

	OCCUPATIONAL WELLBEING AND EMPLOYEE WELLBEING ATTRIBUTES	45
3.1	OCCUPATIONAL WELLBEING.....	45
3.1.1	The Wellbeing Concept	45
3.1.2	Affective Wellbeing.....	47
3.1.3	Models of Wellbeing	49
3.1.4	The Circumplex Model	52
3.1.4.1	<i>The Circumplex Model of Affect</i>	52
3.1.4.2	<i>Circumplex Model of Occupational Wellbeing</i>	54
3.2	EMPLOYEE WELLBEING ATTRIBUTES	56
3.2.1	Conceptualisation of Burnout.....	56

3.2.2	Conceptualisation of Work-Engagement	58
3.2.3	Conceptualisation of Workaholism	63
3.2.4	Conceptualisation Job Satisfaction	65
3.3	RELATIONSHIP BETWEEN EMPLOYEE WELLBEING ATTRIBUTES AND OCCUPATIONAL WELLBEING.....	68
3.3.1	Burnout and Occupational Wellbeing	68
3.3.2	Work Engagement and Occupational Wellbeing.....	71
3.3.3	Workaholism and Occupational Wellbeing	73
3.3.4	Job Satisfaction and Occupational Wellbeing	74
3.4	TYPE COMBINATIONS OF OCCUPATIONAL WELLBEING BASED ON CIRCUMPLEX MODEL OF WELLBEING.....	76
3.5	CHAPTER SUMMARY	78
CHAPTER 4		
	ANTECEDENTS TO OCCUPATIONAL WELLBEING.....	80
4.1	ANTECEDENTS	80
4.1.1	Conceptualisation of Antecedents	80
4.1.2	Antecedents investigated in current study.....	80
4.2	PSYCHOSOCIAL ANTECEDENT VARIABLES.....	81
4.2.1	Conceptualisation of Age	81
4.2.2	Conceptualisation of Job Demands-Resources	82
4.2.3	Conceptualisation of Work-Related Sense of Coherence	86
4.3	RELATIONSHIP BETWEEN PSYCHOSOCIAL ANTECEDENT VARIABLES AND OCCUPATIONAL WELLBEING.....	89
4.3.1	Age and Occupational Wellbeing	89
4.3.2	Job Demands-Resources and Occupational Wellbeing	91
4.3.3	Work-Related Sense of Coherence and Occupational Wellbeing.....	93
4.4	RELATIONSHIP BETWEEN PSYCHOSOCIAL ANTECEDENT VARIABLES AND EMPLOYEE WELLBEING ATTRIBUTES	94
4.4.1	Age	94
4.4.1.1	<i>Age and Burnout</i>	<i>94</i>
4.4.1.2	<i>Age and Work-Engagement.....</i>	<i>95</i>

4.4.1.3	<i>Age and Workaholism</i>	96
4.4.1.4	<i>Age and Job Satisfaction</i>	97
4.4.2	Job Demands-Resources	99
4.4.2.1	<i>Job Demands-Resources and Burnout</i>	99
4.4.2.2	<i>Job Demands-Resources and Work-Engagement</i>	100
4.4.2.3	<i>Job Demands-Resources and Workaholism</i>	102
4.4.2.4	<i>Job Demands-Resources and Job Satisfaction</i>	103
4.4.3	Work-Related Sense of Coherence	104
4.4.3.1	<i>Work-Related Sense of Coherence and Burnout</i>	104
4.4.3.2	<i>Work-Related Sense of Coherence and Work-Engagement</i>	105
4.4.3.3	<i>Work-Related Sense of Coherence and Workaholism</i>	106
4.4.3.4	<i>Work-Related Sense of Coherence and Job Satisfaction</i>	107
4.5	CHAPTER SUMMARY	108

CHAPTER 5

	POSITIVE AND NEGATIVE OUTCOMES OF OCCUPATIONAL WELLBEING	109
5.1	OUTCOMES	109
5.1.1	Conceptualisation of Outcome Variables	109
5.1.2	Outcomes investigated in current study	109
5.2	POSITIVE AND NEGATIVE OUTCOMES	110
5.2.1	Conceptualisation of Organisational Commitment – Positive Outcome	110
5.2.2	Conceptualisation of Turnover Intention - Negative Outcome	113
5.3	RELATIONSHIP BETWEEN POSITIVE AND NEGATIVE OUTCOMES AND OCCUPATIONAL WELLBEING	116
5.3.1	Organisational Commitment and Occupational Wellbeing	116
5.3.2	Turnover Intention and Occupational Wellbeing	117
5.4	RELATIONSHIP BETWEEN POSITIVE AND NEGATIVE OUTCOMES AND EMPLOYEE WELLBEING ATTRIBUTES	118
5.4.1	Organisational Commitment (Positive Outcome)	118
5.4.1.1	<i>Organisational Commitment and Burnout</i>	119
5.4.1.2	<i>Organisational Commitment and Work-Engagement</i>	119
5.4.1.3	<i>Organisational Commitment and Workaholism</i>	120

5.4.1.4	<i>Organisational Commitment and Job Satisfaction</i>	121
5.4.2	Turnover Intention (Negative Outcome)	122
5.4.2.1	<i>Turnover Intention and Burnout</i>	122
5.4.2.2	<i>Turnover Intention and Work Engagement</i>	123
5.4.2.3	<i>Turnover Intention and Workaholism</i>	124
5.4.2.4	<i>Turnover Intention and Job Satisfaction</i>	125
5.5	CHAPTER SUMMARY	126

CHAPTER 6

INTEGRATION - OCCUPATIONAL WELLBEING TYPES FOR THE HEALTHCARE INDUSTRY OF SOUTH AFRICA		127
6.1	OCCUPATIONAL WELLBEING IN THE HEALTHCARE INDUSTRY OF SOUTH AFRICA: THEORETICAL LENS	127
6.2	OCCUPATIONAL WELLBEING TYPES FOR THE HEALTHCARE INDUSTRY OF SOUTH AFRICA: AN OVERVIEW OF THE LITERATURE REVIEW	128
6.2.1	Hypothetical theoretical Relationship Between the Employee Wellbeing Attributes.	132
6.2.2	Hypothetical Relationship Between the Psychosocial Antecedent Variables and the Occupational Wellbeing Type Combinations	137
6.2.3	Hypothetical Relationship Between the Positive and Negative Outcome Variables and the Occupational Wellbeing Type Combinations.	139
6.3	CHAPTER SUMMARY	141

CHAPTER 7

EMPIRICAL STUDY		142
7.1	DETERMINATION AND DESCRIPTION OF THE SAMPLE	143
7.1.1	Distribution of Gender Groups in the Sample	144
7.1.2	Distribution of Race Groups in the Sample	144
7.1.3	Distribution of Age Groups in the Sample	145
7.1.4	Distribution of the Education Qualifications in the Sample	146
7.1.5	Distribution of Occupational Groups in the Sample	147
7.1.6	Distribution of Tenure Groups in the Sample	148
7.1.7	Summary of Socio-Demographic Profile of Sample	149
7.1.8	Integration and Discussion: Biographical Profile of the Sample and Frequencies	150

7.2	CHOOSING AND MOTIVATING THE PSYCHOMETRIC BATTERY.....	151
7.2.1	Measurement of Wellness Related Attributes	151
7.2.2	Measurement of Psychosocial Antecedent Variables	151
7.2.3	Measurement of Positive and Negative Outcomes	152
7.2.4	Biographical Variables.....	152
7.2.5	Psychometric Properties of the Measures of the Employee Wellbeing Attributes.....	152
7.2.5.1	<i>The Utrecht Work Engagement Scale (UWES)</i>	152
7.2.5.2	<i>Burnout Scale</i>	154
7.2.5.3	<i>The Dutch Work Addiction Scale (DUWAS)</i>	155
7.2.5.4	<i>The Job Satisfaction Scale (JSS)</i>	157
7.2.6	Psychometric properties of the measures of the psychosocial antecedent variables	158
7.2.6.1	<i>Age was determined from biographical section of the questionnaire.....</i>	158
7.2.6.2	<i>The Job Demands-Resources Scale (JDERS)</i>	158
7.2.6.3	<i>The Work-Related Sense of Coherence Scale (Work-SoC).....</i>	160
7.2.7	Psychometric properties of the measures of the positive and negative outcome variables	161
7.2.7.1	<i>The Organisational Commitment Scale (OCS).....</i>	161
7.2.7.2	<i>The Turnover Intention Scale (TIS-6).....</i>	163
7.2.8	Limitations of the psychometric battery	164
7.3	ETHICAL CONSIDERATIONS AND ADMINISTRATION OF THE PSYCHOMETRIC BATTERY.....	165
7.4	SCORING OF THE PSYCHOMETRIC BATTERY	166
7.5	FORMULATION OF THE RESEARCH HYPOTHESES	166
7.6	STATISTICAL PROCESSING OF THE DATA	168
7.6.1	Stage 1: Descriptive Statistical Analyses.....	168
7.6.1.1	<i>Validity: Confirmatory Factor Analysis and Exploratory Factor Analysis.....</i>	169
7.6.1.2	<i>Reliability: Cronbach's Alpha Co-efficient</i>	173
7.6.1.3	<i>Means, Standard Deviations, Skewness, Kurtosis and Frequencies.....</i>	173
7.6.2	Correlation Analysis: Pearson Product Moment Correlation	174
7.6.3	Inferential and Multivariate Statistical Analysis	175
7.6.3.1	<i>Cluster Analysis Using K-Means</i>	176
7.6.3.2	<i>Multivariate Analysis of Variance (MANOVA)</i>	177

7.6.3.3	<i>Multinomial Logistic Regression Analysis</i>	178
7.6.3.4	<i>Standard Multiple Regression Analysis</i>	179
7.6.3.5	<i>Hierarchical Moderated Regression Analysis</i>	180
7.6.4	Statistical Level of Significance	181
7.7	CHAPTER SUMMARY	181

CHAPTER 8

RESEARCH RESULTS	182
8.1 VALIDITY AND RELIABILITY OF THE MEASURING INSTRUMENTS	182
8.1.1 Burnout Scale	182
8.1.1.1 <i>Confirmatory Factor Analysis of the Burnout Scale</i>	182
8.1.1.2 <i>Exploratory Factor Analysis of the Burnout Scale</i>	183
8.1.1.3 <i>Reliability of the Burnout Scale</i>	184
8.1.1.4 <i>Integration and Discussion: Validity and Reliability of the Burnout Scale</i>	184
8.1.2 Work Engagement Scale (UWES)	185
8.1.2.1 <i>Confirmatory Factor Analysis of the UWES</i>	185
8.1.2.2 <i>Exploratory Factor Analysis of the UWES</i>	185
8.1.2.3 <i>Reliability of the UWES</i>	186
8.1.2.4 <i>Integration and Discussion: Validity and Reliability of the UWES</i>	186
8.1.3 Workaholism Scale (DUWAS)	187
8.1.3.1 <i>Confirmatory Factor Analysis of the DUWAS</i>	187
8.1.3.2 <i>Reliability of the DUWAS</i>	189
8.1.3.3 <i>Integration and Discussion: Validity and Reliability of the DUWAS</i>	189
8.1.4 Job Satisfaction Scale (JSS)	190
8.1.4.1 <i>Reliability of the JSS</i>	190
8.1.4.2 <i>Discussion: Reliability of JSS</i>	191
8.1.5 The Job Demands-Resources Scale (JDRS)	191
8.1.5.1 <i>Confirmatory Factor Analysis of the JDRS</i>	191
8.1.5.2 <i>Exploratory Factor Analysis of the JDRS</i>	191
8.1.5.3 <i>Reliability of the JDRS</i>	193
8.1.5.4 <i>Integration and Discussion: Validity and Reliability of the JDRS</i>	194
8.1.6 The Work-Sense of Coherence (Work-Soc) Scale	195

8.1.6.1	<i>Confirmatory Factor Analysis of the Work-SoC Scale</i>	195
8.1.6.2	<i>Exploratory Factor Analysis of the Work-SoC Scale</i>	195
8.1.6.3	<i>Reliability of the Work-SoC Scale</i>	196
8.1.6.4	<i>Integration and Discussion: Validity and Reliability of the Work-SoC Scale</i>	196
8.1.7	The Organisational Commitment Scale (OCS)	197
8.1.7.1	<i>Confirmatory Factor Analysis of the OCS</i>	197
8.1.7.2	<i>Exploratory Factor Analysis of the OCS</i>	197
8.1.7.3	<i>Reliability of the OCS</i>	199
8.1.7.4	<i>Integration and Discussion: Validity and Reliability of the OCS</i>	199
8.1.8	Turnover Intention Scale (TIS-6)	200
8.1.8.1	<i>Reliability of the TIS-6</i>	200
8.1.8.2	<i>Discussion: Reliability of TIS-6</i>	200
8.2	DESCRIPTIVE STATISTICAL ANALYSIS OF THE MEASUREMENT CONSTRUCTS	201
8.2.1	Integration and Discussion: Descriptive Statistics	202
8.3	CORRELATION ANALYSIS	205
8.3.1	Integration and discussion: Correlation Analysis – Pearson Product Moment Correlation	207
8.4	INFERENTIAL STATISTICS	209
8.4.1	Research Aim 1	209
8.4.1.1	<i>Determining Occupational Wellbeing Type Combinations</i>	209
8.4.1.2	<i>Integration and Discussion of The Cluster Analysis</i>	215
8.4.2	Research Aim 2	218
8.4.2.1	<i>Differences Between the Occupational Wellbeing Types and the Psychosocial Antecedent Variables</i>	218
8.4.2.2	<i>Predicting the Occupational Wellbeing Types by Means of The Psychosocial Antecedent Variables</i>	221
8.4.2.3	<i>Integration and Discussion of the MANOVA and Multinomial Logistic Regression Analysis</i>	224
8.4.3	Research Aim 3	228
8.4.3.1	<i>Predicting Positive and Negative Outcomes by Means of The Occupational Wellbeing Types</i>	228

8.4.3.2	<i>Determining if the Occupational Wellbeing Types Differ Significantly with Regard to the Positive and Negative Outcomes</i>	229
8.4.3.3	<i>Integration and Discussion of the MANOVA And Multiple Regression Analysis</i>	231
8.4.4	Research Aim 4	233
8.4.4.1	<i>Determining If the Occupational Wellbeing Types Moderate the Relationship between the Psychosocial Antecedent Variables and the Positive and Negative Outcome Variables</i>	233
8.4.4.2	<i>Determining if the Occupational Wellbeing Types Moderated the Relationship Between Job Resources and Turnover Intention</i>	234
8.4.4.3	<i>Determining if the Occupational Wellbeing Types Moderated the Relationship Between Work-SoC and Organisational Commitment</i>	236
8.4.4.4	<i>Determining if the Occupational Wellbeing Types Moderated the Relationship Between Work-SoC and Turnover Intention</i>	239
8.4.4.5	<i>Integration and Discussion of the Hierarchical Moderated Regression Analysis</i>	240
8.5	SYNTHESIS: DETERMINING OCCUPATIONAL WELLBEING TYPES IN THE HEALTHCARE INDUSTRY	243
8.6	CHAPTER SUMMARY	244

CHAPTER 9

	CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS	246
9.1	CONCLUSIONS	246
9.1.1	Conclusions Relating to Literature Review	246
9.1.1.1	<i>Literature Research Aim 1</i>	246
9.1.1.2	<i>Literature Research Aim 2</i>	247
9.1.1.3	<i>Literature Research Aim 3</i>	249
9.1.1.4	<i>Literature Research Aim 4</i>	250
9.1.1.5	<i>Literature Research Aim 5</i>	251
9.1.2	Conclusions Relating to the Empirical Study	252
9.1.2.1	<i>Empirical Research Aim 1</i>	252
9.1.2.2	<i>Empirical Research Aim 2</i>	254

9.1.2.3 Empirical Research Aim 3.....	255
9.1.2.4 Empirical Research Aim 4.....	256
9.1.3 Conclusions Relating to Central Hypothesis	257
9.2 LIMITATIONS	257
9.2.1 Limitations of the Literature Review.....	257
9.2.2 Limitations of the Empirical Study	259
9.3 RECOMMENDATIONS	260
9.3.1 Recommendations for the Health-Care Institutions Investigated in this Study	260
9.3.2 Recommendations for Industrial and Organisational Psychology.....	264
9.3.3 Recommendations for Future Research	265
9.4 EVALUATION OF THE RESEARCH	267
9.4.1 Value Added at a Theoretical Level.....	268
9.4.3 Value Added at a Practical Level	270
9.5 CHAPTER SUMMARY	272
 REFERENCES	 273

LIST OF FIGURES

<i>Figure 1.1</i>	Warr’s Scale of Job-Related Affective Wellbeing.....	3
<i>Figure 1.2</i>	The Circumplex Model of Emotions. Adapted from Russell (1980) and Warr (1994).....	4
<i>Figure 1.3</i>	Overview of the Research Methodology Phase.....	29
<i>Figure 3.1</i>	Conceptualisation of Job-Related Affective Wellbeing. Source: Warr (1990).....	49
<i>Figure 3.2</i>	The Original Circumplex Model of Affect. Emotions are posed in circularly space. Source: Russell (1980).....	53
<i>Figure 3.3</i>	Two-dimensional view of subjective wellbeing indicating affects of work attitude. Source: Bakker and Oerlemans (2011).	55
<i>Figure 3.4</i>	Conceptual model: The impact of job burnout dimensions on worker wellbeing. Source: Lizano (2015)	70
<i>Figure 4.1</i>	The original Job Demands-Resources (JD-R) Model of Burnout. Source: Demerouti et al. (2001).....	83
<i>Figure 4.2</i>	The Revised Job Demands-Resources (JD-R) model to include Work Engagement Source: Schaufeli and Bakker (2004)	86
<i>Figure 4.3</i>	The extended JDR model illustrating the dual psychological process	92
<i>Figure 6.1</i>	Hypothesised theoretical occupational wellness model for the healthcare industry of South Africa	132
<i>Figure 7.1</i>	Sample distribution by gender (n = 461)	145
<i>Figure 7.2</i>	Sample distribution by race (n = 461).....	146
<i>Figure 7.3</i>	Sample distribution by age (n= 461).....	147
<i>Figure 7.4</i>	Sample distribution by educational qualification (n=461).....	148
<i>Figure 7.5</i>	Occupation Distribution in the Sample (n=461)	149
<i>Figure 7.6</i>	Sample Distribution by Tenure (n=461).....	150
<i>Figure 8.1</i>	The three occupational wellbeing types (n=461)	215
<i>Figure 8.2</i>	Interaction affect between the engaged vs exhausted type and the relationship between job resources and turnover intention	236
<i>Figure 8.3</i>	Interaction effects between the exhausted and engaged types and the relationship between Work-SoC and organisational commitment	238

Figure 8.4 Interaction effects between the exhausted and burned-out types and the relationship between Work-SoC and organisational commitment 239

Figure 8.5 Interaction effects between the exhausted and engaged types and the relationship between Work-SoC and turnover intention 241

LIST OF TABLES

Table 3.1	Affective Wellbeing Axes of Measurement and Levels of Specificity (Warr, 1987, p. 47)	48
Table 3.2	Overview of the Three Main Models of Wellbeing. Source: Van Horn et al. (2002)	52
Table 3.3	The three main views concerning workaholism (Harpaz & Snir, 2009).....	65
Table 3.4	Overview of the most widely used definitions of Job Satisfaction	68
Table 6.1	Research Hypotheses.....	141
Table 7.1	Gender Distribution in the sample (n= 461)	145
Table 7.2	Race Distribution in the Sample (n = 461)	146
Table 7.3	Age Distribution in the Sample (n = 461).....	147
Table 7.4	Educational Qualification Distribution in the Sample (n=461)	148
Table 7.5	Occupational Distribution in the Sample (n=461)	149
Table 7.6	Tenure Distribution in the Sample (n=461)	150
Table 7.7	The Main Characteristics of the Sample Profile.....	151
Table 7.8	Research Hypotheses.....	168
Table 7.9	Different Levels of Statistical Significance (Tredoux & Durrehim, 2013)	182
Table 8.1	Confirmatory Factor Analysis: Construct Validity of Burnout scale	183
Table 8.2	Factor loadings for Burnout scale	184
Table 8.3	Cronbach’s Alpha coefficient: Burnout scale (n=461)	186
Table 8.4	Confirmatory Factor Analysis: Construct Validity of UWES.....	185
Table 8.5	Factor loadings for UWES	187
Table 8.6	Cronbach’s Alpha coefficient: UWES (n=461).....	187
Table 8.7	Confirmatory Factor Analysis: Construct Validity of DUWAS	189
Table 8.8.	Confirmatory Factor Analysis: Construct Validity of DUWAS	189
Table 8.9	Cronbach’s Alpha coefficient of DUWAS (n=461).....	191
Table 8.10	Cronbach’s Alpha coefficient of JSS (n=461).....	191
Table 8.11	Confirmatory Factor Analysis: Construct Validity of JDRS	192
Table 8.12	Factor loadings of JDRS.....	193
Table 8.13	Cronbach’s Alpha coefficient for JDRS (n=461)	194
Table 8.14	Confirmatory Factor Analysis: Construct Validity of Work-SoC.....	196

Table 8.15	Factor loadings for Work-SoC	197
Table 8.16	Cronbach’s Alpha coefficient of Work-SoC (n=461)	197
Table 8.17	Confirmatory Factor Analysis: Construct Validity of Organisational Commitment	198
Table 8.18	Factor loadings for Organisational Commitment	199
Table 8.19	Cronbach’s Alpha coefficient Organisational Commitment Scale (n=461).....	200
Table 8.20	Cronbach’s Alpha coefficient of TIS-6 (n=461)	201
Table 8.21	Descriptive Statistics: Mean Scores, Standard Deviations, Skewness and Kurtosis for the Eight Scales.....	202
Table 8.22	Pearson Product Moment Correlation Coefficients on the Scales (n = 461)	207
Table 8.23	Iteration History – Change in Cluster Centres	211
Table 8.24	Number of cases in each cluster	212
Table 8.25	Iteration History – Change in Cluster Center	212
Table 8.26	ANOVA Results for Two-Cluster Model	213
Table 8.27	Iteration History – Changes in Clusters.....	213
Table 8.28	Number of cases in each cluster	213
Table 8.29	ANOVA Results for the Three-Cluster Model.....	214
Table 8.30	Comparison of the employee wellbeing attributes across the three clusters ..	214
Table 8.31	Significance of the multivariate test	220
Table 8.32	MANOVA with occupational wellbeing types as independent variables (n=461).....	220
Table 8.33	Pairwise Comparisons (n=461)	221
Table 8.34	Pairwise comparisons between occupational wellbeing types and psychosocial antecedent variables	222
Table 8.35	Results of multinomial logistic regression with Engaged type as reference category	223
Table 8.36	Results of the Parameter Estimates with Engaged type as reference category	229
Table 8.37	Results of multinomial logistic regression with Burned-Out type as reference category	230
Table 8.38	Results of the Parameter Estimates with Burned-Out type as reference category	231

Table 8.39	Relationship between Occupational Wellbeing Types and Positive and Negative Outcome Variables	231
Table 8.40	Significance of the multivariate test	231
Table 8.41	MANOVA with occupational wellbeing types as independent variables (n=461).....	231
Table 8.42	Cluster Number of Cases (n=461)	237
Table 8.43	Pairwise comparisons between occupational wellbeing types and positive and negative outcome variables.....	240
Table 9.1	Recommendations for HealthCare Institutions	262

CHAPTER 1

SCIENTIFIC OVERVIEW OF THE RESEARCH THESIS

This research focuses on the occupational wellbeing of employees in the healthcare industry in South Africa. This research seeks to determine occupational wellbeing types based on a composite set of employee wellbeing attributes (comprising burnout, work engagement, workaholism and job satisfaction), and determining the extent of type differences in as far as it pertains to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), as well as positive and negative outcome variables (comprising organisational commitment and turnover intention). The culmination of knowledge derived from the relationship between the occupational wellbeing types, psychosocial antecedent variables and outcome variables of the subjects is used to determine the nomological net for each of the identified occupational types. The knowledge from the nomological net serves the purpose to potentially inform affective wellbeing practices within the healthcare industry in South Africa.

This chapter seeks to provide background and rationale in light of this study. Thereafter, the problem statement and research questions are formulated. Based thereupon, the aims that this research seeks to address will follow. The paradigm perspectives which guides this research will be discussed, in addition to the research design and methodology. Lastly, the layout of the chapters is presented and discussed in brief, followed by a chapter summary.

1.1 BACKGROUND AND RATIONALE FOR THE RESEARCH

The context of this study is the occupational well-being of employees in the healthcare industry in South Africa. A stable and productive healthcare service is of vital importance to any country, as such services are essential and invaluable to all members of society (Van der Colff & Rothmann, 2009). However, healthcare professionals are subjected to pressures stemming from the on-going dynamism of health-based organisations. This includes a growing economy, technological advances, increased patient expectations, optimisation of healthcare organisations evolving in line with models based on the effectiveness, efficiency and suitability of healthcare interventions, and the necessity for more evidence-based and high-quality healthcare (d’Ettoire & Greco, 2015). Other debilitating factors which may affect healthcare professionals include fatigue, lack of work-life balance, and coping with emergencies (Sirsawy,

Steinberg, & Raubenheimer, 2016). Earlier research shows that healthcare workers are exposed to higher levels of stress and stress-related health problems, such as repeated severe exhaustion, as compared to other occupational groups (d’Ettorre & Greco, 2015; Rothmann, 2008; Van der Colff & Rothmann, 2009; Von Holdt & Murphy, 2005).

Employee retention has become an increasingly important challenge for organisations (Page & Vella-Brodrick, 2009), with the healthcare industry being no exception. Determining means to encourage employee commitment within an organisation and retaining valuable employee skills has therefore taken top priority for organisations (Coetzee, Oosthuizen, & Stoltz, 2015). Strong and possibly radical measures are necessary to arm public healthcare workers with the necessary resources to successfully deal with the challenging work environments, to maintain wellbeing levels among employees, and to reverse the high turnover rates of employees who withdraw from the healthcare industry due to the overburdened environment (Stander De Beer & Stander, 2015).

Affective wellbeing is a topic that receives increasing attention as a means to increase and retain employee satisfaction within an organisation, and subsequent organisation retention (Page & Vella-Brodrick, 2009). Keyes (2005) considers general affective wellbeing to be fundamental for mental health, whereas Muchinsky (2000) considers the latter to be fundamental for human experience, holistically. According to Warr (1987), affective wellbeing is a personal evaluation of whether a person is or isn’t feeling well. The investigation of wellbeing as a structure of emotional experience has been on-going since the 1950s. According to Mäkikangas, Feldt, and Kinnunen (2007), general affective wellbeing is described as the degree of pleasantness and arousal. Watson and Tellegen (1985) divide emotions into the positive and negative affect, which are two distinct and dominant dimensions.

Within the occupational health psychology context, it should be noted that the structure of affective wellbeing is categorised similar to that of general affective wellbeing (Mäkikangas et al., 2007). The latter model was first introduced by Peter Warr (1987), and subsequently adopted by Paul Spector and colleagues 10 years later (Van Katwyk, Spector, Fox, & Kelloway, 2000). The latter models classify work-related emotions using dimensions of pleasantness and arousal, and both models present a specific scale for the purpose of measuring work-related emotions. According to Warr (1994), measures of affective wellbeing are among the most important, if not the most important, indicators of psychological wellbeing. The value of affective wellbeing lies in its multi-dimensional approach and its potential to capture

subtleties, complexities, and changes in the experience of work that general, uni-dimensional measures are unable to capture.

Research on the structure of affective wellbeing reflects that it has evolved to comprise several different major classes of affective experience, including anxiety-comfort, depression-pleasure, boredom-enthusiasm, tiredness-vigour and anger-placidity. Mäkikangas et al. (2007) conducted a study to theoretically determine the structure of job-related affective wellbeing as proposed by Warr (1987). The authors conclude that Warr's (1987) scale of job-related affective wellbeing is best conceptualised as comprising four interrelated dimensions of job-related anxiety, comfort, depression, and enthusiasm (Mäkikangas et al., 2007) as depicted in figure 1.1. While a number of underlying dimensions may account for the relationship between the above-mentioned affects in the context of occupational wellbeing, empirical evidence suggests that the pleasure-displeasure axis accounts for most of the variance of affective wellbeing. It is for this reason that the affective employee wellbeing attributes to be investigated for the intended study forms part of the circumplex model of emotions (Russel, 1980; Warr, 1994).

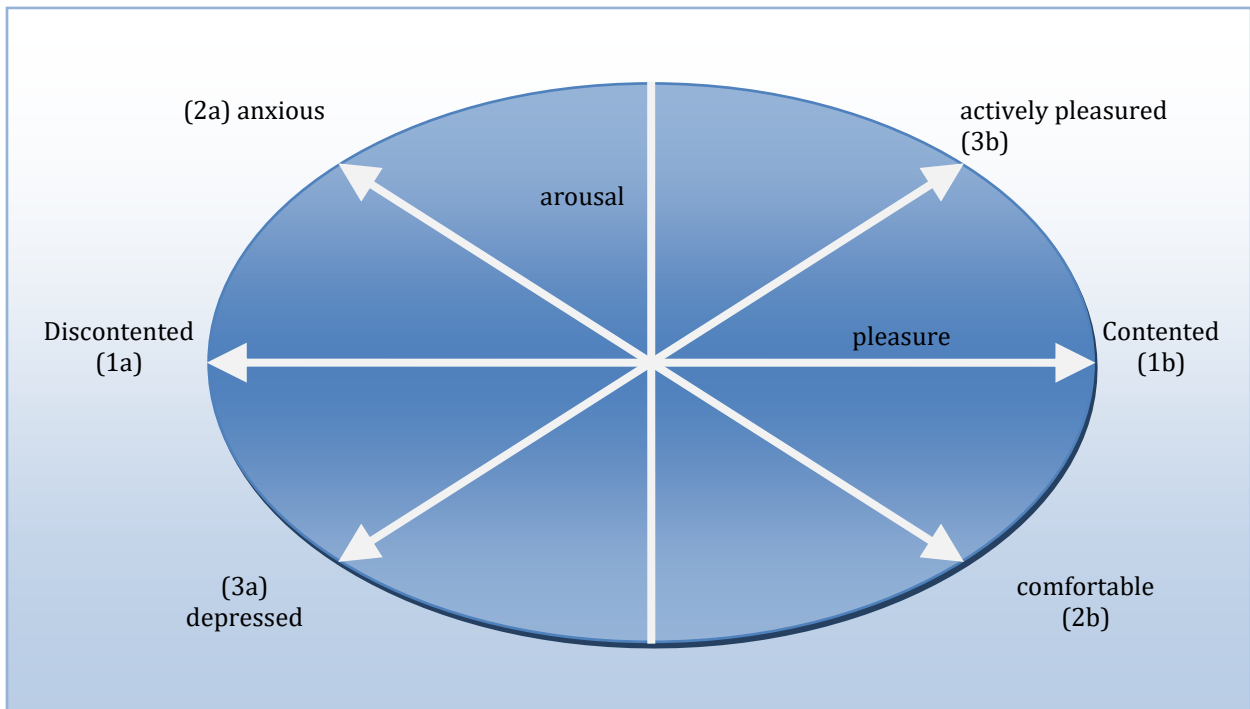


Figure 1.1: Warr's Scale of Job-Related Affective Wellbeing. Adapted from Warr (1987)

The circumplex model of emotions (Russel, 1980; Warr, 1994), depicted in figure 1.2, has received attention for its application in the context of occupational health psychology (Mäkikangas et al., 2015).

Bakker and Oerlemans (2011), argue that within the circumplex model, the four different states of occupational wellbeing (burnout, work engagement, workaholicism and job satisfaction) can be placed in the two-dimensional space comprised of activation and pleasure, and can be used to explain the complex nature of employee wellbeing. In the model, job-related affective states are classified (using two orthogonal axes, representing the pleasure and activation states) into four quadrants that comprise unpleasant affective states of high or low activation, and pleasurable affective states of high or low activation.

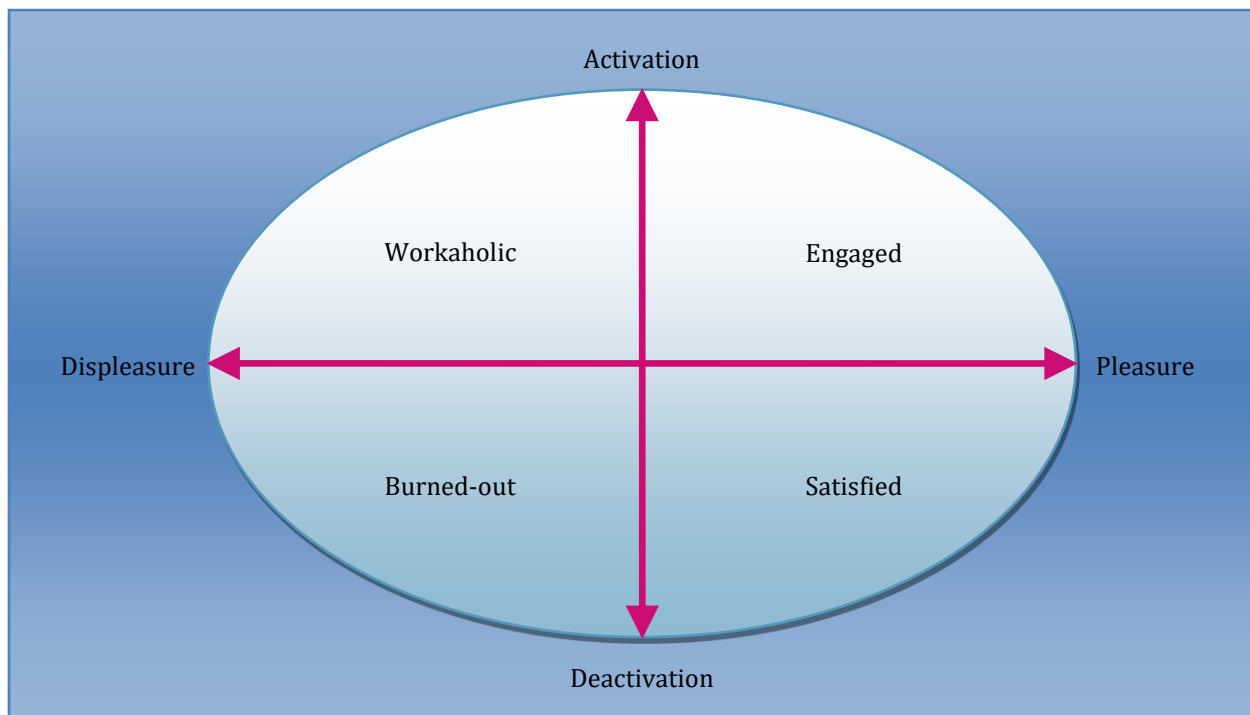


Figure 1.2: The Circumplex Model of Emotions. Adapted from Russell (1980) and Warr (1994)

However, there is little information available about affective employee wellbeing attributes and how these attributes manifest within individuals (Mäkikangas et al., 2015), form combination types, or form models such as the circumplex model of emotions. Rothmann (2008) investigated burnout, work engagement, occupational stress and job satisfaction as components of work-related wellbeing in a sample comprising the police force in South Africa. The objective of the study was to investigate the relationship between the dimensions of work-related wellbeing. The results showed support for a four-factorial model of work-related wellbeing comprising the dimensions of burnout, engagement, occupational stress and job satisfaction. According to Bakker and Oerlemans (2011), four occupational

wellbeing constructs (forming a circumplex model), namely, work engagement, job satisfaction, burnout and workaholism, represent different states of pleasantness and arousal which describe the multifaceted nature of employee wellbeing. Salanova, Del Libano, Llorens, and Schaufeli (2014) investigated this circumplex model of wellbeing and found that engaged and workaholic employees experienced the highest levels of energy, while the most pleasure was found amongst engaged employees, and lastly, workaholics and (together with burned-out employees) showed the highest levels of displeasure in the workplace.

For the purposes of this study, the four most frequently investigated work-related wellbeing attributes, and those forming the circumplex model of emotions (Bakker & Oerlemans, 2011), as per Mäkikangas et al. (2015) and Salanova et al. (2014), is used to measure affective wellbeing types including work engagement, job satisfaction, burnout and workaholism.

Work engagement is defined by Schaufeli, Salanova, Gonzalez-Romá, and Bakker (2002) as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication and absorption. Bakker et al. (2008) suggests that work engagement is characterised by a high level of energy and a strong identification with one's work. Work engagement has important consequences for organisational outcomes such as organisational commitment and personal initiative for extra-role behaviour (Costa, Passos, & Bakker, 2016). According to Christian et al. (2011), low levels of engagement may be viewed as problematic for individuals where associated with impaired wellbeing. For organisations, the latter is linked with low performance levels.

Job satisfaction is defined as a pleasurable or positive emotional state resulting from the appraisal of one's job experience (Locke, 1976). Spector (2008) suggests that job satisfaction influences job attitudes and various aspects about the job. The consequences of job satisfaction include better performance, reduced withdrawal, and counter-productive behaviours. According to Spector (2008), since job satisfaction affects emotions, it influences employee wellbeing with regards to job productivity, employee turnover, absenteeism and life satisfaction.

Burnout is defined as a persistent, negative, work-related state among individuals, primarily characterised by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation and the development of dysfunctional attitudes and behaviours at work (Schaufeli & Enzmann, 1998). An

employee's level of burnout and affective wellbeing can determine the overall wellness climate of a work environment (Van Der Colff & Rothmann, 2009). Furthermore, Hansen, Buitendanch, and Kanengoni (2015) suggest that burnout has often been linked to the experience of stress and, ultimately, to job dissatisfaction.

Schaufeli, Taris, and Van Rhenen (2008) adopt the view that workaholism should be interpreted as an addiction. That is, it is an excessive and persistent behaviour with harmful consequences. Workaholics work harder than prescribed, and typically neglect life beyond the job. The researchers found that burnout and engagement are negatively correlated, whereas burnout and workaholism are positively correlated.

In order to determine the affect and impact of the above-mentioned occupational wellbeing attributes, the outcome variables of organisational commitment and turnover intention are investigated as organisational retention-related dispositions. Meyer and Allen (1991) state that organisational commitment refers to an inner condition connecting employees to the organisation. Commitment typically refers to work attitudes or psychological connections shown by an employee towards an organisation (Meyer & Allen, 1991). Chen, Wu, Chang, and Lin (2015) report a link between job satisfaction and organisational commitment in the healthcare industry. Employees with the greatest job satisfaction are more likely to remain in an organisation and make efforts to achieve organisational objectives. According to Sharma and Dhar (2015), healthcare employees can become emotionally exhausted due to the work environment and job demands, which create an imbalance in social exchange relations, resulting in reduced levels of organisational commitment.

Turnover is costly to any organisation but can be particularly costly for the healthcare sector as turnover can worsen the patient care experience (Collini, Guidroz, & Perez, 2015). According to Tett and Meyer (1993), turnover intention is defined as the deliberate willingness to exit the organisation. According to Collini et al. (2015), research suggests that one of the primary indicators of turnover and turnover intention is the extent to which employees are engaged with work.

However, earlier research suggests that the relationship between occupational wellbeing attributes and organisational retention-related dispositions might not be linear, and that there may be factors which may precede this relationship. As such, the preceding variables (psychosocial antecedent variables)

investigated throughout this study include age, job demands, job resources and work-related sense of coherence.

Age, job demands, job resources and work-related sense of coherence (Work-SoC) appear to significantly impact individual work engagement, job satisfaction, burnout and workaholism (Mäkikangas et al., 2016; Van der Westhuizen & Ramasodi, 2016). According to Mäkikangas et al. (2016), owing to the multi-faceted process of development, older individuals may be more competent than their younger counterparts in the performance of various work-related tasks. Furthermore, age may be beneficial in the form of increased maturity and an emotional regulation process in as far as it impacts on how employees respond to negative events at work. For example, maturity in age is a buffer against negative consequences of workload on job and life satisfaction (Mäkikangas et al., 2016). Work-SoC is a personal resource which is found to be positively related to job resources and work engagement, negatively related to job demands and burnout, and to partially mediate the relationship between job demands and exhaustion, and job resources and work engagement (Van der Westhuizen & Ramasodi, 2016; Vogt, Jenny, & Bauer, 2013). Feldt (1997), stated that as one's sense of coherence increases over a period of time, it has the ability to decrease the intensity of burnout.

The ultimate purpose of the study was to determine occupational wellbeing types in the South African health care industry. The study explored and determined these occupational well-being types as follows: Investigating a composite set of employee wellbeing attributes (comprising burnout, work engagement, workaholism and job satisfaction), and determining the extent of type differences in as far as it pertains to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), as well as positive and negative outcome variables (comprising organisational commitment and turnover intention). In addition, to determine the nomological net for each of the identified occupational types. Lastly, to use the knowledge gained from the research study to inform affective wellbeing practices within the healthcare industry in South Africa.

1.2 PROBLEM STATEMENT

Industrial and organisational psychologists and human resource practitioners are faced with the challenge of developing empirically tested and scientifically accepted methods for assisting the health care industry with ensuring and safeguarding the wellbeing of their employees. One of the most noted challenges is the

lack of research and investigation into this topic. A review of current literature of occupational wellbeing in the health care industry, the employee well-being attributes, psychosocial antecedent variables and positive and negative outcome variables investigated in this study highlighted various research problems and gaps, which are discussed below.

According to Mäkikangas et al. (2015), a deeper understanding of the patterns of occupational wellbeing indicators that exist within employees will assist both researchers and managers to gain an improved comprehension of occupational wellbeing. To offer support to an employee's wellbeing, a person needs to understand it comprehensively, and not place emphasis on isolated relevant aspects (Mäkikangas et al., 2015). As such, the constructs of occupational wellbeing attributes and the organisational retention-related dispositions are essential in studying employee wellbeing within the healthcare industry. Investigating the relationship dynamics between these variables may assist in constructing a psychological wellness model for the healthcare industry that could help inform wellness practices.

Employment within the healthcare sector has its unique set of stressors. Aside from the responsibility of caring for ill patients, there are physical challenges and psychological challenges, as well as environmental, technological and economic pressures (d'Ettoire & Grecco, 2015; Sirsawy, 2016). Furthermore, Coetzee and Rothmann (2005) analysed occupational stressors across 14 different occupations in South Africa and concluded that stress levels are especially high in the health sector. Despite the concerns and challenges, very little research could be sourced on the psychological wellness models for healthcare workers, especially within the South African context.

Van der Colff and Rothmann (2009) investigated the relationship between occupational stress, sense of coherence, burnout and work engagement of registered nurses in South Africa. The results indicate that the experience of depletion of emotional resources and feelings of depersonalisation by registered nurses are associated with stress due to job demands and a lack of organisational support, focus on and ventilation of emotions as a coping strategy, and weak sense of coherence.

Rothmann and Malan (2011) investigated whether job stress and coping strategies could predict work-related wellbeing (burnout and work engagement) of hospital pharmacists in South Africa. The results indicate that job-related stress and coping strategies successfully predict burnout and work engagement of South African hospital pharmacists.

Narainsamy and Van der Westhuizen (2013) explored work-related wellbeing in a medical laboratory setting. The results of this study support a four-factorial model of work-related wellbeing comprising burnout (exhaustion and cynicism), engagement (vigour and dedication), occupational stress (job demands and lack of job resources), and job satisfaction (intrinsic and extrinsic satisfaction).

Soh, Zarola, Palaiou, and Furnham (2016) investigated the dimensions of work-related wellbeing (work engagement, job satisfaction and psychological stress) and possible predictors of personality and perceived organisational support among ambulance personnel in the United Kingdom. The results of this study suggest significant correlations between the dimensions of job satisfaction, engagement and stress. Furthermore, the results support a hierarchical model with job satisfaction, stress and engagement loading onto one higher-order factor of work wellbeing.

In reference to the above studies mentions, the originality of the current study vests in the circumplex model of emotions being applied to identify combination types of occupational wellbeing attributes (i.e. burnout, work engagement, workaholism and job satisfaction), as well as how the latter combination types differ based on psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) and outcome variables (organisational commitment and turnover intention). There is little research available on the circumplex model of affective wellbeing. Mäkikangas et al. (2015) investigated different types of occupational wellbeing which stemmed from the circumplex model in order to identify its relation to personality. Salanova et al. (2014), classified the typology of employee wellbeing, together with its psychosocial antecedents (job demands, job resources and personal resources) and consequences (organisational commitment, intrinsic interest and positive emotions as positive outcomes, as well as turnover intention and psychosomatic complaints as negative outcomes). Based on their studies, further research is required in order to determine whether the affective wellbeing types as identified can be viewed as universal or as occupation specific (Salanova et al., 2014).

Moreover, although the constructs of interest to the current study have been established throughout the literature, the relationship dynamic between the constructs as they manifest in the healthcare industry, with particular reference to the South African context, is yet to be researched. Thus, the research is authentic and novel in its approach to contributing to the literature on occupational wellbeing types in a South African context.

Further to this, although this study is, in part, a repetition of the model by Salanova et al. (2014) where the aim is to create four types of affective wellbeing which corresponds to well-known states (work engagement, job satisfaction, burnout and workaholism), the originality of this study vests in the inclusion of age, for example, through a determination as to how the affective wellbeing types differ in light of age. A further unique value add of this study is that the particular combination of antecedent affective wellbeing types and outcome variables has previously not been studied before. Previous studies have focused on age and Work-SoC. Age becomes a pertinent factor when exploring affective wellbeing types (Mäkikangas et al., 2016; Wilks & Neto, 2013). Due to the complex process of development, older individuals may be more competent than younger individuals in performing work-related tasks due to resources available for affective coping and emotional maturity. Older individuals also tend to hold positions better aligned with personal characteristics. Age also has benefits in the form of heightened maturity and emotional regulation, where older employees may deal more effectively with negative effects at work such as increased workload and job satisfaction (Mäkikangas et al., 2016; Wilks & Neto, 2013). Wilks and Neto (2013) further suggests that there is ample evidence, in the form of research concluded by Spector (1987), that job satisfaction tends to increase with age as older employees tend to have lower rates of both absenteeism and turnover. Bauer (2009) notes that Work-SoC is beneficial to both the employee and the organisation. For the employee, having a high level of Work-SoC could translate into them finding their work understandable, rewarding and manageable, the result of which is a healthy, productive and happy employee, and it can further result in increased participation in decision making on the part of employees (Bauer, 2009). For the organisation, high levels of Work-SoC fosters better performance for the organisation, reduced work withdrawals, reduced absenteeism and turnover intention (Bauer, 2009). Van der Westhuizen (2018) reported that Work-SoC provides incremental validity above general SoC in predicting work wellness.

In summary, whilst occupational wellbeing types have previously been studied and established, this has not been done in the South African context, or within the context of the healthcare industry. Furthermore, the particular nomological network for occupational types, as investigated in this study, has also not been previously tested, especially with the inclusion of age and Work-SoC. This highlights the importance of the study, and its unique contribution.

The problem statement gives rise to the following general research question, accompanied by a set of subsequent specific research questions as outlined below:

Which occupational wellbeing types can be distinguished in the healthcare industry in South Africa, based on the circumplex model of wellbeing? Further to this, how do these types differ with regard to psychosocial antecedents and positive and negative outcomes?

Based on the above-mentioned general research question, the following research questions are formulated in terms of the literature review and empirical study:

1.2.1 Research Questions Relating to the Literature Review

In terms of the literature review, the specific research questions are as follows:

Research question 1: How are occupational wellbeing and its attributes of work engagement, job satisfaction, burnout, and workaholism conceptualised in the literature review, and which type combinations of these constructs could be determined based on the circumplex model of affective employee wellbeing?

Research question 2: To which degree could occupational wellbeing types be expected to differ with regard to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence)?

Research question 3: To which degree could occupational wellbeing types be expected to differ with regard to positive and negative outcomes of wellbeing (organisational commitment and turnover intention)?

Research question 4: What do theoretical models of occupational wellbeing types, their associated psychosocial antecedents, and positive and negative organisational outcomes look like?

1.2.2 Research Questions Relating to the Empirical Study

In terms of the empirical study, the specific research questions are as follows:

Research question 1: What is the direction and magnitude of the statistical interrelationships between the employee wellbeing attributes (burnout, work engagement, workaholism, job satisfaction), and

determine which type combinations of occupational wellbeing can be distinguished based on the measurements of burnout, work engagement, workaholism and job satisfaction.

Research question 2: Do the type combinations of occupational wellbeing differ with regard to psychosocial antecedents (age, job demands, job resources and work-related sense of coherence)?

Research question 3: Do the type combinations of occupational wellbeing positively and significantly predict the positive and negative outcome variables (organisational commitment and turnover intention)?

Research question 4: Do the occupational wellbeing types moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and the positive and negative outcome variables (organisational commitment and turnover intention) and can conclusions be drawn regarding the nomological net of the identified occupational wellbeing types.

Research question 5: What conclusions and recommendations can be formulated for affective wellbeing practices in the healthcare industry and what suggestions can be made for future research in the field?

1.3 AIMS OF THE RESEARCH

Based on the above-mentioned, the following aims of this research are formulated:

The general aim of the research is to determine which occupational wellbeing types can be distinguished based on the circumplex model of wellbeing (burnout, work engagement, job satisfaction, workaholism), and how do these types differ with regard to psychosocial antecedents (age, job demands, job resources and work-related sense of coherence) and positive and negative outcomes (organisational commitment and turnover intention) in the health-care industry in South Africa.

The following specific aims are formulated for the literature review and the empirical study:

1.3.1 Specific Aims Relating to the Literature Review

In terms of the literature review, the specific aims are as follows:

Research aim 1: To determine how occupational wellbeing and its attributes of work engagement, job satisfaction, burnout and workaholism are conceptualised in the literature review, and to further establish which type combinations of these constructs could be determined based on the circumplex model of affective employee wellbeing.

Research aim 2: To determine to which degree occupational wellbeing types could be expected to differ with regard to psychosocial antecedents (age, job demands, job resources, and work-related sense of coherence).

Research aim 3: To determine to which degree occupational wellbeing types could be expected to differ with regard to positive and negative outcomes of wellbeing (organisational commitment and turnover intention).

Research aim 4: To determine what theoretical models of occupational wellbeing types, their associated psychosocial antecedents, and positive and negative organisational outcomes look like.

1.3.2 Specific Aims Relating to the Empirical Study

The specific aims of the empirical study are as follows:

Research aim 1: To conduct an empirical investigation which explores the direction and magnitude of the statistical inter-correlations between the employee wellbeing attributes (burnout, work engagement, workaholism, job satisfaction), and determine which type combinations of occupational wellbeing can be distinguished based on the measurements of burnout, work engagement, workaholism and job satisfaction.

Research aim 2: To determine whether the occupational wellbeing type combinations differ with regard to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence).

Research aim 3: To determine whether the occupational wellbeing type combinations significantly predict the positive and negative outcome variables (organisational commitment and turnover intention).

Research aim 4: To determine if the occupational wellbeing types moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and the positive and negative outcome variables (organisational commitment and turnover intention, in order to draw conclusions regarding the nomological net of the identified occupational wellbeing types.

Research aim 5: To draw conclusions and recommendations for affective wellbeing practices in the healthcare industry and what suggestions can be made for future research in the field.

1.4 STATEMENT OF SIGNIFICANCE

Occupational wellbeing types (as a combination of work engagement, job satisfaction, burnout and workaholism) may differ with regard to psychosocial antecedent variables (age, job demands job resources and work-related sense of coherence), and positive and negative outcome variables (organisational commitment and turnover intention). No previous studies explaining the relationship between the occupational wellbeing types, psychosocial antecedent variables and outcome variables have been carried out to date in South Africa or in the healthcare industry at large.

Two international studies, those of Salanova et al. (2014) and Mäkikangas et al. (2015), investigated occupational wellbeing types based on work engagement, job satisfaction, burnout and workaholism. However, no such study has been undertaken in the South African context to date. The latter studies indicate that there is a theoretical question that requires answering when investigating occupational wellbeing types, namely, is the types identified by the international studies universal or are these types occupation specific? This research will also contribute to shedding more light in answering this question.

This research further contributes to the field of industrial and organisational psychology in two distinct areas, namely on a theoretical and practical level.

1.4.1 Potential Contribution on a Theoretical Level

From a theoretical standpoint, this study may prove useful in testing the circumplex model of affective wellbeing in relation to a particular nomological net, especially with the inclusion of age and work-soc. If a significant relationship is found, then the findings should prove useful in the development of a

theoretical occupational wellbeing model (factoring in age and Work-SoC) for the facilitation of the wellbeing and retention of healthcare workers which can be empirically tested. Furthermore, this study will contribute to adding knowledge on the occupation-specific wellbeing types which requires confirmation by additional studies to that of Salanova et al. (2014) and Mäkikangas et al. (2015), especially within the South African context, as per prior emphasis.

1.4.2 Potential Contribution on a Practical Level

On a practical level, industrial and organisational psychologists and human resource practitioners may develop a better understanding of the circumplex model of affective employee wellbeing model and its application to the healthcare industry with particular reference to the South African context. The positive results from the proposed research could raise awareness of the fact that individuals working in the healthcare industry in South Africa differ in terms of their occupational wellbeing types, and that these types further differ with regard to psychosocial antecedent variables and positive and negative outcome variables.

Where statistically and practically significant relationships between constructs are found, the findings may prove useful in guiding industrial and organisational psychologists, as well as human resource practitioners, in making selection and development decisions. This is credited to the notion that knowledge of the occupational wellbeing types will provide understanding into types that are best suited to handle the pressures and stressors of the healthcare environment. Furthermore, the results may prove useful in highlighting necessary interventions required in order to address the issues specific to the different types affecting employees to facilitate improvement of wellbeing in the occupational context.

1.5 THE RESEARCH MODEL

The research model of Mouton and Marais (1996) serves as a framework for this research. According to this research, the model is based on the five dimensions of social science research, namely the sociological, ontological, teleological, epistemological and methodological dimensions. The five dimensions are observed as facets of the research process.

The importance of the research model is that it represents a social process. Mouton and Marais (1996) assert that social science research may be observed as a collaborative human activity whereby the social reality may be objectively studied in order to gain an understanding thereof. The model is described as a systems theoretical model with three sub-systems. The sub-systems are interrelated with one another, as well as within the research domain of the specific discipline – in this particular case, Industrial and Organisational Psychology. The sub-systems are anchored in a specific research paradigm and comprise the intellectual climate, the market of intellectual resources, and the research process itself, which are discussed below.

1.6 PARADIGM PERSPECTIVE OF THE RESEARCH

According to Mouton and Marais (1996), a paradigm refers to the intellectual climate and a range of methodological values or beliefs and assumptions, which underlie the theories and models which form the definite context of research. Their origin is mainly philosophical and is neither testable, nor meant to be tested.

1.6.1 The Intellectual Climate

The intellectual climate refers to the variety of meta-theoretical assumptions, values or convictions, which are accepted and held by those practising within a discipline at a certain stage (Mouton & Marais, 1996). The intellectual climate entails a discussion of the disciplinary perspectives, as well as the meta-theoretical assumptions of the research.

1.6.1.1 The Disciplinary Perspective

The disciplinary perspective refers to the field of study in which research is undertaken. This study is conducted from the discipline of Industrial and Organisational Psychology (IOP). IOP is defined as the scientific study of employees within the work environment, including the application of psychological principles, theory, and research to the work setting (Schreuder & Coetzee, 2010; Cummings & Worley, 2015). According to Schreuder and Coetzee (2010), IOP serves two objectives: firstly, to conduct research in an effort to increase knowledge and understanding of human work behaviour; and secondly, to apply such knowledge in order to improve work behaviour, the work environment and the psychological conditions of workers.

The discipline of IOP is divided into a series of sub-disciplines. The relevant subfields to be included in this research are organisational psychology, employee and organisational wellbeing, and personnel psychology.

(a) Organisational Psychology

According to Schreuder and Coetzee (2010) and Cummings and Worley (2015), organisational psychology focuses on the influence organisations have on the attitudes and behaviour of its employees. Organisational psychology aims to study work at the organisational level in order to better understand how workers function within an organisation, and how the organisation functions as a whole (Salkind, 2012). Thematically, the notions of organisational commitment and turnover intention as a composite set of organisational-retention-related dispositions are of relevance to this research.

(b) Employee and Organisational Wellbeing

Employee wellness is a broad category which encompasses a number of workplace factors (Keyes, 2006). Within the overall category of wellness, it is suggested that employee engagement (a combination of cognitive and emotional variables in the workplace) generates a greater frequency of positive affect (job satisfaction, commitment, joy, fulfilment, interest and caring). Positive affect then relates to the efficient application of work, employee retention, creativity, and ultimately, business outcomes. According to Schreuder and Coetzee (2010), employee wellness has become a popular field of study in IOP since 1990.

(c) Personnel Psychology

Personnel psychology is regarded as one of the oldest and more traditional fields of IOP (Schreuder & Coetzee, 2010). The field is concerned with the scientific study of individual differences in work behaviour and job performance, and attempts are made to fit a candidate to a specific job or a job environment (Cascio & Aguinis, 2011). The rationale of immediate importance hereto is that the successful integration of the individual and the job can lead to potentially higher levels of job performance and satisfaction. As a sub-discipline of IOP, personnel psychology represents the overlap between psychology and human resource management (Schreuder & Coetzee, 2010). Personnel psychology is relevant to this study as the study seeks to determine affective wellbeing types and how they differ with regard to psychosocial antecedents as well as positive and negative outcome variables. In this regard, the study highlights affective wellbeing types that are best suited to the healthcare industry.

1.6.1.2 *Meta-theoretical Assumptions*

Four paradigms guide this research. With regards to the literature review, the salutogenic, positive psychology and open systems paradigm forms the basis thereof. The positivist paradigm applies to the empirical study.

1.6.1.2.1 *Literature Review*

(a) Salutogenic Paradigm

Salutogenesis is a concept derived from the work of Antonovsky (1979) and is concerned with exploring the origin of health. Antonovsky's (1979) particular research focuses on the discovery of factors that maintain individual health, especially those in difficult circumstances, as opposed to investigating the reasons for ill health (Cilliers, 2011). The salutogenic paradigm is conceptualised as a cyclical process whereby an individual may feature anywhere at any point in time along a "health ease/disease continuum" in which health-ease is the optimal end of the continuum and disease at the unfavourable point (Antonovsky, 1979). According to this model, an individual's position and direction of movement along the continuum is determined by the interplay of opposing forces of environmental threats, one's resistance, and the strength of one's sense of coherence. In this regard, the former focuses on the origins of health and wellness, the location and development of personal and social resources, and adaptive tendencies relating to individual dispositions. Ultimately, this enables individuals to select appropriate strategies to deal with confronting stressors and anxieties (Cilliers, 2011). Salutogenic thinking has inspired much research into why some individuals cope successfully despite omnipresent stressors, whereas others conversely do not.

Thematically, the construct of work-related sense of coherence is presented from the salutogenic paradigm.

(b) Positive Psychology Paradigm

Positive psychology concentrates on positive experiences at three time points: (1) the past, centering on wellbeing, contentment and satisfaction; (2) the present, which focuses on concepts such as happiness and flow experiences; and (3) the future, with concepts including optimism and hope (Seligman, Steen, Park, & Peterson, 2005). With the positive psychology paradigm, stressors such as work demands in the individual's life and environment are not seen as sources of difficulties but as aspects individuals can

understand, manage, enjoy and get involved in because individuals have strengths and virtues (Seligman & Csikszentmihalyi, 2000).

According to Seligman and Csikszentmihalyi (2000), positive psychology can be distinguished and separated into three nodes:

- the subjective node, which encompasses positive experiences and states across past, present and future (for example, happiness, optimism, wellbeing);
- the individual node, which focuses on characteristics of the 'good person' (for example, talent, wisdom, love, courage, creativity); and
- the group node, which studies positive institutions, citizenship and communities (for example, altruism, tolerance, work ethic).

The constructs of burnout, job demands and job resources, job satisfaction, work engagement, and workaholism are presented from the positive psychology paradigm.

(c) Open-systems Paradigm

The *open-systems paradigm* studies an individual as part of the organisation and as someone who interacts with the external environment (Katz & Kahn, 1978). The open-systems approach is a holistic approach that also emphasises the interdependence between the different sub-systems and elements within an organisation, which are regarded as an open system (French & Bell, 1995). The paradigm is characterised by input and throughputs or transformation. With this paradigm, the organisation moves towards growth and expansion as a system, and a boundary between the system and the external environment exists (Katz & Kahn, 1978). The organisation is seen as one element of a number of elements that act independently. The primary ground is that individuals as self-systems (biological, cognitive, social and psychological) can best be understood by examining their functioning in the wider organisational system which surrounds them (Cummings, 1980). Thematically, the constructs of organisational commitment and turnover intention are presented from the open systems paradigm, as the study is interceded in understanding how these outcomes are related to the occupational wellbeing types.

1.6.1.2.2 Empirical Study

Positivist Paradigm

The empirical study is presented from the positivist research paradigm. This paradigm emphasises that the aim of the research is to generate objective knowledge. This includes an understanding that is fair and unprejudiced, and is based on an external view, without personal involvement or vested interests on behalf of the researcher (Krauss, 2005).

The positivist paradigm holds that knowledge is absolute and objective and that a single objective reality exists external to human beings (Cohen, Manion, & Morrison, 2007). Research results should be reliable, consistent, unbiased, and capable of replication by other researchers. Positivist research is operated primarily (yet not exclusively) through quantitative methods, where data comprises numbers and measures, analysed by statistical methods (Cohen et al., 2007).

According to Creswell (2009), positivist methodology is directed towards explaining relationships. Positivists attempt to identify causes which influence outcomes. The aim is to formulate laws, thus yielding a basis for prediction and generalisation. A deductive approach is undertaken, whereby correlation and experimentation are applied in order to reduce complex interactions between constituent parts (Cohen et al., 2007). Where verifiable evidence is sought through direct experience and observation, this process often involves the engagement of empirical testing, random samples, controlled variables (independent, dependent and moderator) and control groups (Cohen et al., 2007).

According to Scotland (2012), the ontological position of positivism is one of realism. Realism is the perspective that objects have an existence independent of the 'knower'. Thus, a discoverable reality exists independently of the researcher. The positivist epistemology is one of objectivism (Scotland, 2012). Positivists go forth into the world impartially, discovering absolute knowledge about an objective reality. The researcher and the researched are independent entities (Scotland, 2012).

This paradigm is applicable to this research because the constructs used in the research are operationally defined and measured with objective and standardised scales and questionnaires.

1.6.2 Market of Intellectual Resources

Mouton and Marais (1996) suggest that the market for intellectual resources refers to the collection of beliefs that have a direct bearing on the epistemic states of scientific statements. Two major types exist: theoretical beliefs and methodological beliefs.

1.6.2.1 Theoretical Beliefs

Theoretical beliefs are beliefs of which testable statements about social phenomena are described. Theoretical beliefs are divided into conceptual descriptions, as well as models and theories.

(a) Conceptual descriptions

- **Work engagement**

Work engagement is defined as a positive, fulfilling work-related state of mind that is characterised by vigour (i.e. high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence in the face of adversity), dedication (i.e. a sense of significance, enthusiasm, inspiration, pride, and challenge); and absorption (i.e. being fully concentrated and engrossed in one's work where time passes quickly and one has difficulty detaching oneself from work (Bakker, Schaufeli, Michael, Toon, & Taris, 2008). Thus, in the case of engagement, fulfilment exists in contrast to the voids of life that leave people feeling unfulfilled, as is the case of burnout (Bakker et al., 2008; Schaufeli et al., 2002).

- **Job satisfaction**

Locke (1976) defines job satisfaction as a pleasurable or positive emotional state, stemming from one's appraisal of job experience. Implicit in this definition is that job satisfaction encompasses both a cognitive (appraisal of one's job) and affective (emotional state) element. According to Aslan et al. (2014), job satisfaction has positive effects on employee attitudes, loyalty, support, and commitments to the organisation.

- **Burnout**

Burnout is defined as a persistent, negative, work-related state in individuals, primarily characterised by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation,

and development of dysfunctional attitudes and behaviours at work (Schaufeli & Enzmann, 1998). For the purposes of this study, burnout is seen as a psychological response to chronic work stress, typically characterised by feelings of exhaustion as per Asiwe et al. (2014).

- **Workaholism**

Workaholism is generally viewed as a “strong inner, compulsive drive to work excessively hard” (Schaufeli et al., 2008). Workaholism is characterised by high activation and displeasure (Schaufeli et al., 2008). According to Schaufeli et al. (2008), workaholics work harder than their job descriptions require, and dedicate more effort than is expected by colleagues and employers. In so doing, workaholics neglect life outside the workplace.

- **Organisational commitment**

Organisational commitment is defined to reflect three aspects, namely: affective commitment, continuance commitment, and normative commitment. In this regard, organisational commitment reflects an affective attitude towards the organisation, acknowledgement of the consequences of leaving the organisation, and an ethical responsibility to remain with the organisation (Meyer & Allen, 1991).

- **Turnover intention**

According to Tett and Meyer (1993), turnover intention is defined as the deliberate willingness to exit the organisation. Bothma and Roodt (2013) suggest that turnover intention depends on perceived opportunities and the ease of finding another job (especially in tough economic conditions), the role of mobility cognitions, as well as individual differences in search behaviour.

- **Job demands**

Job demands comprise the physical, psychological, social and organisational aspects of the job that require sustained physical and/or psychological effort and are associated with certain physiological and/or psychological costs (Demerouti et al., 2001).

- **Job resources**

Job resources encompass the various physical, psychological, social, and organisational aspects that support individuals in the accomplishment of tasks (Demerouti et al., 2001). By facilitating task

accomplishment, the application of the latter resources has the potential to reduce job demands and contribute to employee wellbeing (Demerouti et al., 2001).

- **Work-related sense of coherence**

The Sense of Coherence (SoC) is a general orientation which influences perception and control of the environment, and ultimately results in meaningful and appropriate action (Antonovsky, 1979). Vogt, Jenny, and Bauer (2013) propose that Work-SoC acts as a moderator of the work-health relationship and may be more dynamic and sensitive to changes in the work context than general SoC. Researchers define Work-SoC as an interactional construct whereby perceptions of comprehensibility, manageability, and meaningfulness are determined by interaction between the characteristics of an employee and the characteristics of the working environment (Vogt et al., 2013).

(b) Theories and models

- **The circumplex model of emotions**

The circumplex model of emotions proposes that all affective states arise from cognitive interpretations of core neutral sensations that are the product of two independent and fundamental neurophysiological systems, one related to valence and the other to arousal or alertness (Russell, 1980).

This study is anchored on the circumplex model of affective wellbeing developed by Russell (1980). Accordingly, all human emotions may be plotted on the surface of a circle that is defined by two orthogonal dimensions that run from pleasure to displeasure and from activation to deactivation (Mäkikangas et al., 2016). In other words, each and every emotion is a combination of varying degrees of pleasure and activation. The latter two fundamental dimensions constitute employee wellbeing, in that employees who experience primarily negative emotions are likely to suffer from burnout and workaholism, whereas employees who experience primarily positive emotions are likely to experience work engagement and job satisfaction. The taxonomy allows one to discuss the differences between the various types of occupational wellbeing attributes (i.e. work engagement, job satisfaction, burnout and workaholism to be investigated in this study), and further allows us to distinguish in which one of the

quadrants different type combinations may be placed based on their status of the pleasure-displeasure dimensions.

The reason for selecting this model stemmed from the wealth of attention that this model has received over the years for its application in the occupational health context (Mäkikangas et al., 2015). Whilst the researcher found this model to be widely accepted and used, it was noted that very limited studies had focused on all four quadrants of the model as this study intended to, thereby contributing to research on the model. Furthermore, this study sought to replicate studies by Mäkikangas et al. (2015) and Salanova et al. (2014) to a certain degree, both of whom also based their studies on this model.

- **The Job-Demands Resources (JD-R) Model**

The primary assumption of the JD-R model (Bakker & Demerouti, 2007; Demerouti et al., 2001) is that the workplace environment has two core characteristics - that of job demands and job resources. The model assumes that two separate, but related psychological processes explain burnout components. The first process is the energetic process, which is considered to impair health. In the energetic process, job demands drain employee mental and physical energy, and therefore contribute to emotional exhaustion (Bakker & Demerouti, 2007). The second process is the motivational process where the absence of job resources impacts on employee motivation and as a result contributes to disengagement and withdrawal (Bakker & Demerouti, 2007). Due to a lack of resources, employees are prevented from achieving goals and personal development and, as a result, tend to detach themselves through depersonalisation and observe work negatively (Bakker et al., 2003).

The JD-R model was seen as applicable for this study as it focuses on negative and positive indicators of employee wellbeing. (Bakker & Demerouti, 2007). There have also been adaptations to the model, where some of the employee wellbeing attributes investigated in this study, i.e. work engagement and burnout to the model as they were viewed as mediators of the relation between job demands and health problems, and job resources and turnover intention Schaufeli and Bakker (2004). Furthermore, the model postulated that the model triggers two different psychological processes (health impairment as a result of job demands and a motivational process which results in positive organisational outcomes as a result of job resources. Given that both occupational wellbeing and positive organisational outcomes such as job satisfaction, work engagement and organisational commitment were investigated in this study, the model seemed both applicable and relevant.

1.7 RESEARCH APPROACH

According to Terre Blanche, Durrheim, and Painter (2006), a research design encompasses the methodology and procedures used to conduct scientific research. Designs are presented according to the research approach and method used (Terre Blanche et al., 2006).

1.7.1 Descriptive Research

According to Mouton and Marais (1996), descriptive research refers to the in-depth description of the individual, situation, group, organisation, culture, sub-culture, interaction or social object. The purpose of this research is to systematically classify the relationships between variables within the research domain. The prevailing aim is to describe issues as accurately as possible.

This research fulfils the requirements of the type of research outlined above.

1.7.2 The Unit of Research

According to Mouton and Marais (1996), in the social sciences, the most common object of research is the individual person. The unit of analysis refers to the objects or things that are researched in order to formulate generalisations of these objects and to further explain differences among them (Terre Blanche et al., 2006).

This research focuses on the constructs of work engagement, job satisfaction, burnout, workaholism, organisational commitment and turnover intention. At an individual level, the individual scores on each of the measuring instruments is to be taken into consideration. The purpose is to determine whether a relationship difference exists between the occupational wellbeing related types (combinations of work engagement, job satisfaction, burnout, workaholism), psychosocial antecedents (age, job demands, job resources and work-related sense of coherence), and positive and negative outcomes (organisational commitment and turnover intention).

1.7.3 The Variables

The general aim of the research is to determine which occupational wellbeing types are distinguishable based on the circumplex model of wellbeing, and how these types differ with regard to psychosocial antecedents and positive and negative outcomes.

According to Terre Blanche et al. (2006), a dependent variable is the research focus, while the independent variable is the presumed cause of the dependent variable.

In this study, the occupational wellbeing types (combinations of work engagement, job satisfaction, burnout, workaholism) are treated as independent, dependent and moderating variables. Firstly, psychosocial antecedents (age, job demands, job resources and work-related sense of coherence) are treated as independent variables, and occupational wellbeing types, as the dependent variable. Secondly, occupational wellbeing types are to be treated as independent variables, and the positive and negative outcomes (organisational commitment and turnover intention) as the dependent variables. Lastly, in the final model, the occupational wellbeing types are treated as moderating variables in the relationship between the antecedent variables (age, job demands, job resources and work-related sense of coherence) on the one hand and outcome variables (organisational commitment and turnover intention) on the other hand.

1.7.4 Delimitations

This study is confined to research dealing with the nomological network between four core constructs, namely work engagement, job satisfaction, burnout, and workaholism, and the resulting differences with regard to factors such as age, job demands, job resources, work-related sense of coherence, organisational commitment and turnover intention.

This research approach does not seek to establish any cause and affect relationships, but rather attempt to investigate whether occupational wellbeing types do, in fact, exist, and whether the latter types differ with regard to psychosocial antecedents as well as positive and negative outcome variables.

1.8 RESEARCH METHOD

The research is conducted in two phases comprising the literature review and the empirical study.

1.8.1 Phase 1: Literature Review

The literature review comprises a review of affective employee wellbeing, psychosocial antecedents, and outcome variables. These variables include work engagement, job satisfaction, burnout, workaholism, job

demands, and job resources, work-related sense of coherence, the influence of age, organisational commitment and turnover intention. The aforementioned are reviewed in the steps outlined hereunder.

Step 1: Conceptualisation of the meta-theoretical context of the healthcare industry in South Africa

Research into the current state of the healthcare industry in South Africa will be evaluated. The challenges posed to the industry, as well as the factors that impact on employee retention will be explored. Finally, the implications of an occupational wellness model that may potentially inform affective wellbeing practices in the healthcare industry in South Africa will be assessed.

Step 2: Conceptualisation of occupational wellbeing and its attributes (work engagement, job satisfaction, burnout and workaholism)

A critical evaluation is made of occupational wellbeing and its attributes (work engagement, job satisfaction, burnout and workaholism), and how these constructs are conceptualised and explained in the literature. Furthermore, the combination of these constructs, and how type combinations are formed through the latter combinations is discussed in as far as it relates to the circumplex model. Finally, the implications of the occupational wellbeing attributes for wellbeing in the healthcare industry are discussed.

Step 3: Conceptualisation of psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence)

A critical evaluation is made of the psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), and how these constructs are conceptualised and explained in literature. Furthermore, the extent to which occupational wellbeing types could be expected to differ with regard to psychosocial antecedent variables such as age, job demands, job resources and work-related sense of coherence is discussed.

Step 4: Conceptualisation of positive and negative organisational outcomes (organisational commitment and turnover intention)

A critical evaluation is made of research relating to the positive and negative constructs of organisational outcomes (commitment and turnover intention), and the way these constructs are conceptualised and explained in the literature. Finally, the extent to which occupational wellbeing types could be expected to

differ with regard to the positive and negative outcomes of wellbeing namely organisational commitment and turnover intention is discussed.

Step 5: The theoretical relationship between the variables to be investigated

This step relates to the theoretical integration of the occupational wellbeing types (work engagement, job satisfaction, burnout and workaholism), and resulting differences with regard to psychosocial antecedents as well as positive and negative organisational outcomes.

1.8.2 Phase 2: Empirical Study

The research encompasses a quantitative survey design comprising the nine steps outlined below.

Step 1: Determination and description of the sample

The procedure in which sample determination and the sample characteristics were made are outlined and elaborated on in this step (see chapter 7).

Step 2: Choosing and motivating the psychometric battery

This step entails a discussion of the measuring instruments used in conducting this research (see chapter 7).

Step 3: Administration of the psychometric battery

In this step, the processes used to collect the data are discussed (see chapter 7).

Step 4: Scoring of the psychometric battery

This step involves a discussion as to how the data was captured and analysed thereafter (see chapter 7).

Step 5: Formulation of research hypothesis

In this step, the research hypotheses for attaining the objectives of the study are formulated (see chapter 7).

Step 6: Statistical processing of data

This step discusses the statistical procedures used in this research (see chapter 7).

Step 7: Reporting and interpreting the results

This step includes a discussion of the manner in which the research results are presented (see chapter 8).

Step 8: Integration of research results

This step involves the integration of the findings pertaining to the literature review with the results from the empirical research in order to present the overall findings of the research (see chapter 8).

Step 9: Formulation of conclusions, limitations, and recommendations

In this step, the conclusions of the research based on the results and the integration with the necessary literature are presented. The limitations of the research are discussed, and recommendations are made as to the overall types and the varying extent of psychosocial variables and outcome variables, and how an occupational wellness model may be used to potentially inform affective wellbeing practices in the healthcare industry in South Africa.

Figure 1.3 below provides a visual overview of the nine steps of the research methodology.

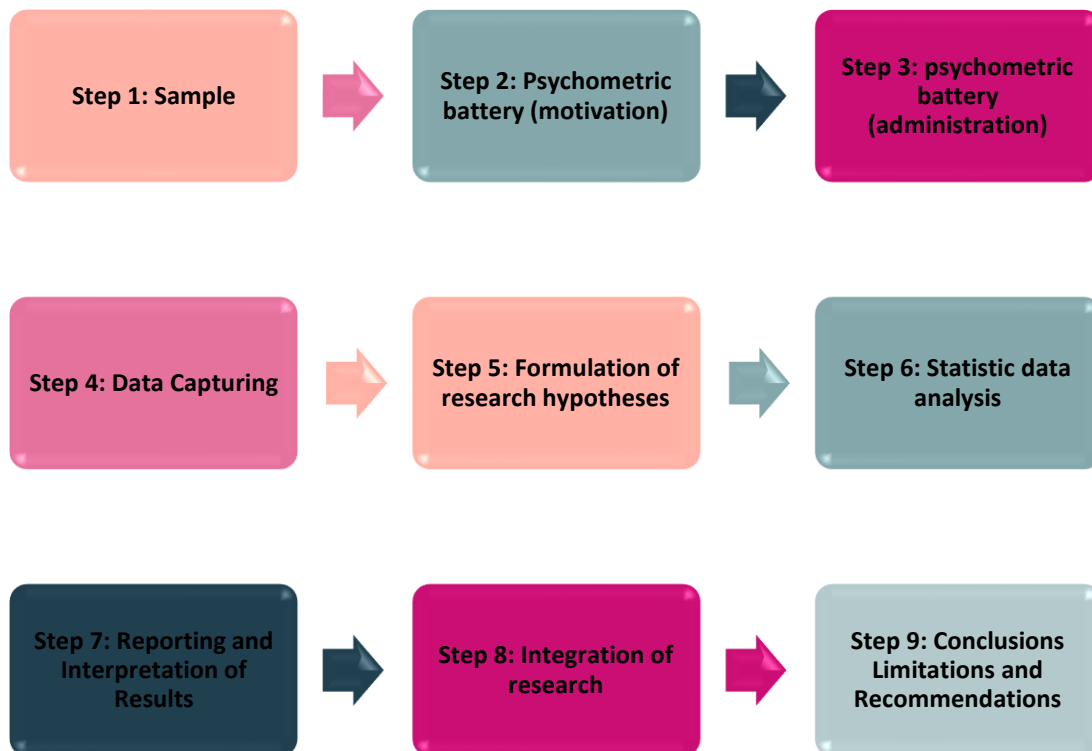


Figure 1.3: Overview of the Research Methodology Phase

1.9 CHAPTER LAYOUT

The chapters in the study include:

- Chapter 1:** Scientific overview of the study
- Chapter 2:** Occupational wellbeing in the healthcare industry in South Africa
- Chapter 3:** Occupational wellbeing and employee wellbeing attributes
- Chapter 4:** Antecedents to occupational wellbeing
- Chapter 5:** Positive and negative outcomes of occupational wellbeing
- Chapter 6:** Integration – Occupational Wellbeing Types for the Healthcare Industry of South Africa
- Chapter 7:** Empirical study
- Chapter 8:** Research results
- Chapter 9:** Conclusions, limitations and recommendations

1.10 CHAPTER SUMMARY

The background to and rationale for the research, the aim of the study, the research model and theories, paradigm perspective, the research approach and the research methodology is accounted for throughout this chapter. The motivation for this study lies in the fact that no known research has been conducted on the composite relationship dynamics among the constructs of work engagement, job satisfaction, burnout, and workaholism in the healthcare industry within South Africa. Furthermore, the differences between types with regard to psychosocial antecedent variables and positive and negative outcome variables aid in designing affective and optimal occupational wellbeing interventions for the healthcare industry.

CHAPTER 2

OCCUPATIONAL WELLBEING IN THE HEALTHCARE INDUSTRY OF SOUTH AFRICA

The aim of this chapter is to provide context to this study by outlining the broader context which underlies this research. This chapter aims to conceptualise the healthcare industry of South Africa, as well as to provide an evaluation of the current state of the industry. Hereinafter follows a discussion of the challenges faced by the industry, and the factors that impact on employee retention within the industry. In the concluding statement, this chapter discusses the occupational wellbeing of employees in the industry.

2.1 THE HEALTHCARE INDUSTRY OF SOUTH AFRICA IN CONTEXT

The recently adopted Sustainable Development Goals (SDGs) of the Republic of South Africa stated one vital health objective: to “ensure healthy lives and promote wellbeing” (SAHR, 2016, p. 46). The South African Constitution prioritises access to healthcare as a fundamental human right (SAHR, 2016). As a result, the significance of work performed by healthcare professionals cannot be overstated, as healthcare services are vital and invaluable to society. It is therefore concerning to note that the healthcare system, and subsequently, healthcare professionals in South Africa, face a myriad of challenges in the work environment (Koekemoer & Mostert, 2006).

The South African population exceeds 56 million people at present (Stats SA, 2017). South Africa is characterised by an inequitable distribution of healthcare services (Hatcher, Onah, Kornik, Peacocke, & Reid, 2014), where healthcare comprises of the public sector, led by government, and the private sector. The South African Constitution guarantees every citizen access to healthcare services (according to section 27 of the Bill of Rights). Citizens are afforded the opportunity to access both public and private healthcare services, however, access to private healthcare services is dependent on an individual’s ability to afford such services (Hwabamungu et al., 2017). The public healthcare sector in South Africa is large, complex and fragmented. It is poorly managed at the strategic level, and all too often at the point of service. The public healthcare sector employs over a quarter million people. With the increased demand for healthcare resources, this number is bound to increase (Hwabamungu et al., 2017). Conversely, the private sector serves a significant minority population with quality healthcare. Hatcher et al. (2014) reported that nearly half (approximately 43.7%) of the population lives in rural areas throughout South Africa, where rural

communities have access to only 12% of the country's doctors. The majority of South African doctors (70%) work in the private sector, leaving fewer than 11 000 doctors to serve 85% of South Africans without health insurance. On average, 13 generalist doctors and 2 specialist doctors are available per 100 000 sample population in rural areas throughout South Africa (Hatcher et al., 2014). According to Hwabamungu et al. (2017), the situation is compounded as the public sector has undergone major transformation, bringing with it many challenges for the healthcare profession.

South African healthcare institutions, regardless of whether private or public sector institutions, face obstacles preventing the delivery of an efficient and affective healthcare system, consequently impacting upon employee wellbeing. Research into the national healthcare work environment reveals that the most prevalent challenge in the industry is the appalling working conditions which healthcare professionals are expected to endure (Armstrong & Rispel, 2015; ; Manyisa & Aswegen, 2017; Mash et al., 2015; Selamu et al., 2017). Working in the healthcare sector in South Africa is extremely demanding, requiring both physical and mental stamina due to the stressors inherent in the South African healthcare system. Healthcare work generally necessitates having to deal with what may be described as the most stressful conditions observed in any work environment (Selamu et al., 2017). Healthcare workers are subjected to life-threatening injuries and illnesses which are further complicated by overwork, tight schedules, paper work, intricate equipment, complex hierarchies of authority and skills, dependent and demanding patients, and patient deaths (Armstrong & Rispel, 2015; Manyisa & Aswegen, 2017; Mayosi & Bentar, 2014; Selamu et al., 2017). In addition, healthcare workers are routinely exposed to dangers such as viruses, bacteria, and needle-prick injuries. Furthermore, the pressurised work environment often forces healthcare workers to do work beyond the scope of job description (Mayosi & Bentar, 2014). According to Selamu et al. (2017), healthcare workers are exposed to a heavy workload, role ambiguity, challenging work environments, and sometimes, limited support in handling disturbed patients, and poor management. Threats to the occupational wellbeing of healthcare workers in South Africa are therefore substantial.

The section hereunder entails a discussion into some of the key factors identified from literature, which poses challenges to the healthcare industry of South Africa. Such challenges are identified as human resource challenges, the burden of disease, challenges stemming from poor infrastructure and resources, patient loads, as well as other pertinent issues identified as posing challenges to the sector.

2.1.1 Human Resources Challenges and Employee Retention

According to the SAHR (2016), a barrier to improved healthcare outcomes is widespread employee shortages within the sector, which is the result of inadequate trainees, geographical maldistributions, and losses due to death, retirement, migration or career change. Poor knowledge about the health workforce, its size, function, and optimal skill mix compounds this crisis (SAHR, 2016).

Human resources may be described as the heart of the healthcare system of any country, and the most important aspect of healthcare systems (Kotzee & Coupe, 2006). A serious human resources shortage of healthcare workers crisis exists on a global scale, but is particularly acute in Africa (Delobele, 2010; Selamu et al., 2017). The end of the 20th century saw South Africa facing a serious healthcare personnel crisis (SAHR, 2016). The World Health Organisation (WHO) estimated that Africa has a needs-based shortage of 818 000 healthcare professionals defined to include doctors, nurses and midwives, and is based on a country requiring 2.28 healthcare professionals per sample population of 1000 people (Scheffler, Mahoney, Fulton, Dal Poz, & Preker, 2015).

The Department of Health in South Africa has attempted to address the shortage of doctors, by introducing various interventions, including an increase in salaries, the introduction of scarce skills programmes and rural allowances, the deployment of foreign doctors, and the upgrading of clinics and hospitals (Kotzee & Couper, 2006). Despite attempts, there remains a shortage of doctors, nurses and community healthcare workers, especially in rural areas where physicians are reluctant to practice (Armstrong & Rispel, 2015). Kinfu et al. (2008) suggests that shortages are aggravated by the retirement of 'baby boomers' as most nurses were born between 1943 and 1964, further suggesting that approximately two thirds of South African nurses are over the age of forty and will soon retire. Lagarde and Blaauw (2009) found that staff shortages stem from the continual growing healthcare needs of citizens from South Africa, the increased number of private sector institutions, and insufficient number of healthcare training institutes. Yumkella (2006) suggests that healthcare worker shortages are linked to three factors: 1) decreased student enrolment in healthcare training institutions, 2) delays or freezes in the hiring of qualified professionals, and 3) high turnover among healthcare workers who are already employed. Moreover, healthcare worker shortages are further attributed to the unattractiveness of the working conditions resulting from the healthcare environment. This includes, but is not limited to: long working hours and work overload, inadequate resources preventing healthcare workers from performing work efficiently, patient overload, poor salary (Lagarde & Blaauw, 2009; SAHR, 2016), gender-related

issues including sexual harassment and gender-based discrimination, lack of recognition for good work, and limited opportunities for career development and advancement (Koetze & Couper, 2006; Pang et al., 2002; Yumkella, 2006). Another important factor exacerbating the personnel predicament is attributed to the closure of nursing colleges which has resulted in fewer nursing graduates. Other factors include offering early retirement packages to senior staff, putting a hold on open job posts which results in reduced numbers of healthcare personnel, and the closing of several NGOs responsible for upskilling healthcare employees (SAHR, 2016).

Contributing to fuelling the shortage of healthcare professionals in the country is the migration (Naicker, Plange-Rhule, Tutt, & Eastwood, 2009). According to Moosa et al. (2014) and Naicker et al. (2009), the already inadequate healthcare systems of Africa, especially sub-Saharan Africa, are severely damaged by the migration of healthcare professionals, and the inability to successfully retain such talent. Naicker et al. (2009) suggests that since 1996, 37% of doctors and nurses migrated to Australia, Canada, Finland, France, Germany, Portugal, United Kingdom and United States. It is estimated that approximately 23 407 South African doctors and in excess of 10 000 South African nurses work abroad (Naicker et al., 2009). The migration of South African healthcare professionals has been a topic of discussion for a substantial period of time. A multitude of studies have produced varying estimates of emigration trends of healthcare professionals, and several causes for such migration are identified (Moosa et al., 2014; Naicker et al., 2009). According to Naicker et al. (2009), the migration of healthcare workers is influenced by “push” and “pull” factors. Push factors include: healthcare under-funding, a lack of career opportunities, poor remuneration, poor working conditions, shortcomings in healthcare management, personal security, limited career structure, poor intellectual stimulation (Naicker et al., 2009; Pang, Lansang, & Haines, 2002), dealing with a high propensity of violence and road accident cases, high maternal and child mortality (Jenkins, Gunst, Blitz, & Coetzee, 2015), HIV/AIDS, workplace security, a strained relationship with management, workplace morale, heightened risk of contracting tuberculosis (The HRH Strategy for Healthcare [2010/13-2016/17]). Pull factors include greater financial rewards, and improved working conditions (Naicker et al., 2009).

According to Yumkella (2006), increased attention is placed on low healthcare worker retention in light of the costliness associated with such losses, which negatively affects the continuity of care and increase the turnover potential of remaining employees who suffer stress and burnout tasked with the additional burden of care.

Healthcare workers exiting the sector proceed with the benefit of having accumulated valuable knowledge and expertise gained through practical experience. According to Ruotsalainen, Verbeek, Marine, and Serra (2015), many of the challenges that healthcare professionals experience in their work environments not only result in an excess of sick leave being applied for, but also often results in such persons exiting the profession completely. According to the HRH Strategy for Healthcare (2010/13-2016/17), healthcare staff turnover is significantly high throughout the country, with some provinces reporting a turnover as high as 80% per annum. High turnover is accredited to the retention and attraction of healthcare professionals, and urgently needs to be addressed in order to develop a stable and well-capacitated healthcare workforce.

According to Rose and Van Rensburg-Bonthuyzen (2015), there is a global struggle to attract healthcare professionals and maintain retention rates in rural areas. Haskins, Phakathi, Grant, and Horwood (2016) report that difficulties in recruiting and retaining skilled healthcare professionals in South Africa results in disproportionate allocation of healthcare professionals between urban and rural areas. An estimated 46% of South Africans reside in rural areas, where only 19% of all healthcare professionals, and particularly 12% of doctors work in these areas. The recruitment and retention of medical professionals in rural areas reveals no single factor responsible for such retention. Instead, various interlinking and complex factors that impact on and influence whether medical professionals choose to work in either rural or urban areas (Haskins et al., 2016). According to Dolea, Stormot, and Braichet (2010), as cited in Haskins et al. (2016), such factors are categorised into financial, personal or professional support, education, and regulatory factors. Additional factors contributing to the shortage of healthcare professionals in rural areas includes inadequate supervision, poor referral and support structures, lack of appropriate equipment and drugs, and poor management structures (Rose & Van Rensburg-Bonthuyzen, 2015).

A study by Kotzee and Couper (2006) which investigates the retention of healthcare workers in South Africa reveals that the following may impact on improving the retention of healthcare workers; increasing salaries and rural allowances, increasing support by specialist consults, improving working conditions, increasing leave allocations, improving rural hospital environments, providing recreational facilities, assisting the families of rural doctors, providing recognition, and appreciation for the work that rural doctors do.

According to Benatar (2013), South Africa is fortunate to have the capacity to train skilled, well-motivated,

and caring practitioners who provide high value individual care with the highest professional standards throughout many private and public healthcare facilities. The challenge lies with sustaining and augmenting this capacity, requiring support for excellence in the teaching and upskilling of healthcare employees, and enhancing access to such care. Strategies to retain healthcare professionals are developed on a global scale by the World Health Organisation, Australia, Canada and South Africa (Jenkins et al., 2015).

Examples of strategies employed in South Africa include the introduction of a compulsory community service year for doctors and allied healthcare professionals, and recently, for nurses, the introduction of a mid-level clinical associate programme, the start of the National Health Insurance project, and infrastructure upgrades throughout South Africa. It is important to note that these strategies do not translate into improved retention of staff overnight, and many of the challenges are still an excruciating daily reality for healthcare workers nationally.

2.1.2 The Burden of Disease

Africa has the greatest burden of disease of any continent and the poorest healthcare services (Oestergaard et al., 2011; WHO, 2008). In the World Health report of 2007, it was estimated that African healthcare systems provide care to address the world's most substantial disease burden, with only 3% of global healthcare workers and scant financial resources (Selamu et al., 2017). According to Mash et al. (2015), healthcare workers are at risk of numerous instances of biological exposure in healthcare settings. This is largely owing to close contact with patients with infectious diseases, with particular reference to tuberculosis, including drug-resistant tuberculosis, and hepatitis, as well as poor infection control in hospitals (Mash et al., 2015). The latter infectious diseases (tuberculosis, drug-resistant tuberculosis and hepatitis), also vary across categories of healthcare workers, from clinical (doctors, nurses, clinical assistants) to laboratory staff, general assistants, and administrators in the healthcare sector. Healthcare workers are likely to acquire infectious diseases at threefold the risk as compared to the general population (Mash et al., 2015).

The SAHR (2016; 2017) suggest that the current burden of occupational and non-occupational disease reported by healthcare workers covers the spectrum of communicable and non-communicable diseases. According to Mayosi and Bentar (2014), two of the biggest communicable diseases which greatly impact the healthcare workforce in South Africa is the HIV/AIDS pandemic and tuberculosis. High rates of

tuberculosis and HIV pose a serious threat to healthcare systems and healthcare workers (Mayosi & Bentar, 2014).

- HIV/AIDS pandemic. South Africa, accounting for 0.7% of the world's population, accounts for 17% of the global burden of the Human Immunodeficiency Virus (HIV) infection (Mayosi & Bentar, 2014). Further thereto, resource shortages in South African hospitals places a great burden on the country's healthcare workers to attempt to deliver efficient care to patients living with the disease. According to Manyisa and Aswegen (2017), a study on work satisfaction of professional nurses in South Africa found that 46% of patients in South African hospitals are Auto-Immune Deficiency Syndrome (AIDS) patients where the majority are brought to hospitals when critically ill. In order to care for patients, healthcare professionals are placed at immense risk of contracting the disease.
- Tuberculosis (TB). TB, in all its forms, is a major occupational hazard for healthcare workers globally (von Delft, 2014). South Africa has one of the worst and most dangerous TB epidemics in the world (Mash, 2015; Mayosi & Bentar, 2014). According to Mash (2015), South Africa had the highest incidence of tuberculosis at 1 000 per 100 000 population sample. As a result, healthcare workers are at great risk of contracting the disease, when delivering patient care to such individuals (Manyisa & Aswegen, 2017). This leads to increased stress, poor health, work absenteeism, and the will to exit the industry for many healthcare workers (Manyisa & Aswegen, 2017; Mayosi & Bentar, 2014).

Due to the stress and nature of their work, healthcare professionals are also at risk of developing other health problems. According to the SAHR (2016), obesity, diabetes, hypertension, non-infective respiratory diseases, musculoskeletal disorders (MSDs), and dermatological diseases are all non-communicable disease presentations typically found among healthcare workers in South Africa (SAHR, 2016). In a survey of 200 healthcare workers in a tertiary hospital in Pretoria, the prevalence rates for obesity, diabetes and hypertension were reported as 37%, 10.5% and 19% respectively (SAHR, 2016). In addition, the prevalence rates of lower-back pain in South African healthcare workers ranges from 25% to 58%, and a high number of healthcare workers seek medical help for musculoskeletal-related pain.

Trauma is a well-documented major disease burden in lower- and middle-income countries, with South Africa falling into the middle-income group (SAHR, 2016). Trauma comprises a substantial part of the emergency centre workload at health institutions and entails indeterminate budget use as a result of the

unpredictability of the general burden and injury severity, therefore placing immense strain on healthcare workers (SAHR, 2016). Another notable disease burden is Hepatitis B (HB), a vaccine-preventable liver disease initiated by hepatitis B virus (HBV) infection (Sondlane et al., 2016). HB is a global public health concern, and since it is a blood-borne virus, healthcare workers exposed to patients' blood and bodily fluids are at high risk of occupational exposure (Sondlane et al., 2016). South African healthcare workers are at particularly high risk, since HIV/HBV co-infection is common among South African patients and HIV co-infection has been a firm probability factor for increased HBV replication and transmission (Sondlane et al., 2016). According to Rothe, Schlaich, and Thompson (2013), healthcare workers are at further risk of contracting occupational infections due to needle-stick injuries and exposure to bodily fluids.

Caring for terminally ill patients, coupled with the limitations of the working environment, places an additional burden on the workforce which is already overburdened, demotivated and emotionally exhausted (Manyisa & Aswegen, 2017). A substantial number of healthcare workers in South Africa are incapable of performing the tasks for which workers are employed due to health status (SAHR, 2016). According to Naidoo, Naidoo, and Hariparsad (2016), healthcare workers experience a significant burden of disease caused by a range of workplace hazards, and inadequate institutional management of sickness absence, which results in a high number of lost work days, translating into massive costs. The SAHR (2016) hold that if the management of ill-health among healthcare workers is not addressed in the workplace, this may result in poor decision-making about employees' fitness to work and work incapacity. In turn, this translates to high levels of absenteeism which exceed international benchmarks for the healthcare sector.

In light of the above-mentioned, the need for appropriate disease management of healthcare workers in South Africa is of growing concern.

2.1.3 Infrastructure and Resource Challenges

Health is one of the fundamental rights of every human being, and a robust and accessible healthcare system is a necessity to every country (WHO, 2017). Healthcare systems should be safe, effective, patient-centred, timely, efficient, and equitable (Barton, 2009). However, the everyday realities of hospitals in South Africa force medical professionals and healthcare workers to deal with an array of infrastructure and resource challenges which prevent workers from delivering quality patient care (Koekemoer & Mostert, 2006).

According to Manyisa (2016), hospitals face numerous infrastructure and resource challenges at times which include inadequate personnel, lack of admission beds, and electricity failure, all of which pose challenges to healthcare professionals in delivering services to patients. According to Moyimane, Matlala, and Kekana (2017), medical equipment is a vital component of a healthcare system, and the shortage of medical equipment, either due to unavailability or non-functioning, is a barrier to the ability of the health system to deliver quality healthcare services. The World Health Organisation estimates that between 50 to 80 percent of medical equipment in developing countries is not functional, and such countries lack the technology assessment systems and regulatory controls required to prevent importation of inferior medical equipment (Moyiamane et al., 2017). This results in countries being exposed to dishonest market prices which place patients' lives at risk. Sibiya (2015) states that quality care can only be rendered if there is sufficient high-quality equipment to satisfy patients' needs and improve healthcare worker productivity. Sibiya (2015) holds that equipment maintenance is critical to ensure good quality patient care.

According to Griffith, Pentoney, and Scheetz (2012), drug shortages is a reality for hospitals and physicians in the United States. Within the South African context, serve stock shortages are reported for drugs such as ARVs, vaccines and TB medications. Furthermore, the number of drug shortages has steadily increased over the years, and the shortages are now considered a public health emergency (Patel, 2013).

The abovementioned emphasises that in order to be able to deliver quality patient care and perform duties efficiently and effectively, thereby limiting workplace stressors, healthcare workers require infrastructure and resources of a respectable standard.

2.1.4 Increased Patient Load

Overcrowding is a known global issue in healthcare institutions. Nugas et al. (2014) suggests that overcrowding occurs when the number of patients in a department surpasses the number of allocated staff, physical resources that allow for adequate treatment, and the inability of patients to be granted a ward bed. The problem stems from healthcare institutions facing increased pressure to meet the growing demand in people requiring care, together with a growing population and growing number of infectious and non-communicable diseases affecting the masses.

According to Boyle, Beniuk, Higginson, and Atkinson (2012), hospital overcrowding is especially problematic for emergency departments as it results in a disorderly environment where some patients

purposely occupy a space whilst awaiting ward beds. A further consequence of emergency department overcrowding is staff frustration, which influences patient care quality and sympathy towards the extended waiting times of patients (Boyle et al., 2012). Adini, Laor, and Israeli (2011) state that the consequences of overcrowding strongly relates to patient and staff satisfaction. The increasing pressures placed on healthcare workers as a result of overcrowding contributes to rising stress levels, instigation of conflict situations, and sometimes, frustrated patients verbally and physically abusing staff (Bateman, 2009). Boyle et al. (2012) emphatically suggest that in many countries, overcrowding is the equilibrium state of the healthcare system, and overcrowding impairs patient dignity, privacy and completeness of care.

Workload is the most imported predictor of burnout, lack of involvement and dehumanisation of patients by healthcare personnel (Manyisa & Aswegen, 2017). It is also a major cause for dissatisfaction among healthcare providers and support staff, and influences staff decision-making to exit or remain in the workplace (Manyisa & Aswegen, 2017). Rust and De Jager (2010) report that hospitals are struggling to cope with the demand of increased patient loads caused mainly by the AIDS epidemic and rapid urbanisation where a large number of people are now living in unhealthy conditions in informal settlements. To compound this challenge, there is a nurse shortage and community healthcare workers in rural areas where physicians are reluctant to practice. This results in patients traveling to the city for medical care, increasing the patient load for healthcare workers at these hospitals. According to Anneveld, Van der Linden, Grootendort, and Galli-Leslie (2013), increased patient overload leads to overcrowding, staff shortages and even increased mortality rates. Moreover, this results in patient-building and, in turn, long waiting times, delays and cancellations (Anneveld et al., 2013).

2.1.5 Other Contributing Factors Posing Challenges to the Healthcare Industry

In addition to the abovementioned, various other challenges exist which impact upon the healthcare industry of South Africa.

According to Armstrong and Rispel (2015), healthcare workers in South Africa are also exposed to non-job-related stressors, which may result in sub-optimal performance, and the delivery of sub-par patient care. Such stressors include financial problems, personal demands associated with family responsibilities, commuting, and childcare.

According to Manyisa and Aswegen (2017), and Peltzer, Mashego, and Mabebe (2003), factors affecting

the severity of stress among doctors in South Africa include colleagues not performing in the workplace, inadequate salary, covering work for another employee, frequency of job stress, working overtime, as well as irregular working hours such as nights and shifts, making critical and spontaneous decisions, and dealing with crisis situations. Such challenges pose serious concerns on occupational health and safety for medical professionals. Of significant concern is irregular working hours and shift work, as this poses serious physical, psychological and social health risks to individuals (Mache, Vitzthum, Nienhaus, Klapp, & Groeberg, 2009; Manyisa & Aswegen, 2017).

Employee dissatisfaction by medical professionals is a serious challenge (Manyisa, 2016). According to Manyisa (2016), medical professionals expressed their dissatisfaction regarding the employment of people who do not possess the necessary skills and qualifications in management posts, as well as poor working conditions arising from low salaries, lack of promotions and shortage of staff. The consequence of employee dissatisfaction in the healthcare sector is lack of retention, which also affects the healthcare delivery system, healthcare workers, as well as patients (Khunou & Davana-Maselesele, 2016; Mohase & Khumalo, 2014; Tzeng, 2002).

Poor interpersonal relations between managers and employees prevail in hospitals (Manyisa, 2016). According to Lee and Doran (2017), patient safety is compromised by adverse events and medical errors related to miscommunications between healthcare workers. Poor interpersonal relations are attributed to factors such as negative attitudes of staff members towards each other, poor communication between managers and employees, and centralisation of decision-making (Lee & Doran, 2017; Manyisa, 2016; Lapeña-Moñux, Cibanal-Juan, Maciá-Soler, Orts-Cortés & Pedraz-Marcos 2015). According to Manyisa (2016), such behaviour leads to demoralisation, low morale and absenteeism.

Mayosi and Benatar (2014) suggest that flawed communication systems prevent healthcare workers from receiving crucial information about patients, thereby endangering patient lives. Levinson, Lesser, and Epstein (2010) suggest that communication skills and systems are a fundamental component of delivering patient-centred care.

The aforementioned section discussed some of the pertinent issues that pose challenges to the healthcare industry and which impedes the delivery of an affective healthcare system. Such challenges range from human resource matters, challenges stemming from disease, poor infrastructure and resource challenges,

increased patient load issues, as well as some other relevant issues that were identified in the literature. The following section explores the impact challenges have on the occupational wellbeing of the employees in the sector.

2.2 IMPLICATIONS FOR THE OCCUPATIONAL WELLBEING OF EMPLOYEES IN THE HEALTHCARE INDUSTRY

The preceding discussion has highlighted that the South African healthcare industry is a highly stressed work environment, where workers are faced with countless challenges that impacts on their occupational wellbeing.

Khamisa, Peltzer, Ilic, and Oldenburg (2016) suggest that the medical profession is one of the most stressful professions owing to the emotional nature of patient demands, long working hours and inter-professional conflicts. The consequence thereof contributes to the global recognition of the importance of maintaining the wellbeing of the healthcare workforce in order to deliver quality care (Selamu et al., 2017).

High exposure to stressful events among healthcare workers may manifest itself as depression, anxiety, self-doubt, Post-Traumatic Stress Disorder, insomnia and disturbed relationships with families (Mayosi & Bentar, 2014; Selamu et al., 2017). According to Rispel (2016), occupational stress may have negative effects on employees, including impaired performance, staff turnover, industrial accidents, frustration, burnout, low productivity, diminishing levels of customer service, health problems, absenteeism, dissatisfaction, alcohol and drug usage, and purposefully destructive behaviours, such as spreading rumours (Armstrong & Rispel, 2015). The need for patient orientated care and a patient bill of rights encourages expectations of excellence in the delivery of healthcare services throughout South Africa, which places additional pressure on healthcare professionals to ensure delivery (Benatar, 2004). These factors ultimately impact on an employee's decision to leave the industry altogether, as a means to ensure their wellbeing (Mayosi & Bentar, 2014).

Compared to the general working population, medical personnel suffer from burnout on a greater scale as they deal with high levels of work strain and emotional demands. According to Scheepers et al. (2015), patients of physicians with high levels of occupational wellbeing are more satisfied with treatment and

adhere better to treatment guidelines. Physicians with greater levels of occupational wellbeing have a positive attitude towards work and are more likely to be optimistic and helpful to others (Scheepers et al., 2015). The rationale behind this, according to Scheepers et al. (2015), is that as physicians with high levels of occupational wellbeing experience less stress and more positive emotions, the latter have more energy and mental resources to direct full attention to patients. This resonates with findings that physicians experiencing high levels of occupational wellbeing are likely to direct more attention to patients' psychosocial aspects and inform them more frequently of the care process and on the social impact of the illness process (Scheepers et al., 2015).

Compromised occupational wellbeing of healthcare employees have significant implications on the healthcare system (Armstrong & Rispel, 2015; Manyisa, 2016; Scheepers et al., 2015). Gupta, Moore, and Neto (2015) state that a lack of occupational wellbeing may manifest as lacking interest in work, absenteeism, dissatisfaction, low-quality work, the possibility of medical malpractice (which may occur through negligence and result in legal challenges). All these situations denigrate the image of professionals and may sometimes result in career abandonment, premature retirement, and, in extreme cases, civil or criminal issues which may even result in suicide (Gupta et al., 2015). Conversely, the occupational wellbeing of healthcare workers aids in contributing to health and happiness in the workplace (Selamu et al., 2017). Failure to maintain a healthy relationship with children, disruption of family life, substance abuse, depression, and physical and mental impairment are some of the social consequences that medical professionals face as a result of not being able to achieve and maintain occupational wellbeing.

Ultimately, the healthcare system of South Africa is aimed at attaining better patient health and wellbeing (Selamu et al., 2017). In order to achieve this, a vital and engaged physician workforce is thought to be one of the pertinent conditions under which optimal patient care can occur (Selamu et al., 2017). Focus is to be placed on the promotion and implementation of strategies and programmes to ensure occupational wellbeing of the healthcare workforce which could assist in creating an awareness of wellness issues, and further aid in facilitating personal change and health management, as well as the promotion of a healthy and supportive workplace.

A detailed discussion into the importance of occupational wellbeing of employees in the healthcare industry, including conceptualising occupational wellbeing, follows in Chapter 3.

2.3 CHAPTER SUMMARY

In Chapter 2, the broader context forming the foundation of the research is placed in perspective. The chapter conceptualises the healthcare industry of South Africa, provides an evaluation of the current state of the industry, and subsequently discusses some of the threats and challenges posed to the industry, and through implication, the workforce. In conclusion, the implication of occupational wellbeing for the industry is discussed.

In Chapter 3, the first theoretical research aim is discussed, namely, to conceptualise work engagement, job satisfaction, burnout and workaholism by means of theoretical models in research literature, as a means of defining occupational wellbeing. Furthermore, the chapter determines which combinations of the above-mentioned constructs can be determined based on the circumplex model of affective employee wellbeing, as well as continue the discussion from this chapter regarding the importance of occupational wellbeing for healthcare sector employees.

CHAPTER 3

OCCUPATIONAL WELLBEING AND EMPLOYEE WELLBEING ATTRIBUTES

The aim of this chapter is to address the first literature research aim, namely, to conceptualise occupational wellbeing and the employee wellbeing attributes of work engagement, job satisfaction, burnout and workaholism. Furthermore, each of the employee wellbeing attributes are discussed in light of the relationship with occupational wellbeing. Moreover, existing research into which combination type attributes have already been determined in the literature based on the circumplex model of affective employee wellbeing follows.

3.1 OCCUPATIONAL WELLBEING

This research focuses on the occupational wellbeing of employees in the healthcare industry. Occupational wellbeing has attracted increased interest in recent years (Rothmann, 2002; Van der Colff & Rothmann, 2009) as an important predictor of employee and organisational productivity (Wright et al., 2007), absenteeism, turnover, and performance deficits (Cropanzano et al., 2001). In particular, employee wellbeing in stressful occupations such as the healthcare industry has drawn a keen interest (Bennet, Williams, & Page, 2004).

3.1.1 The Wellbeing Concept

In literature, there seems to be no general conceptualisation of wellbeing (Danna & Griffin, 1999). According to Paim (1995), the concept is very broad and applies to several situations for several unique purposes. Dodge, Daly, Huyton, and Sanders (2012) state that understanding the historical background to the study of wellbeing is vital to its definition.

One of the earliest attempts to define wellbeing derived from Bradburn's (1969) classic research on psychological wellbeing (Dodge et al., 2012). The bulk of the latter research emphasises the difference between positive and negative affect (Dodge et al., 2012). According to the derived model, an individual is likely to have a high level of psychological wellbeing where there exists an excess of positive affect and will rate low in wellbeing in as far as negative affect dominates over that of positive. Ryff (1989) identifies autonomy, environmental mastery, positive relationships with others, purpose in life, realisation of

potential, and self-acceptance as aspects which comprise wellbeing. Wellbeing refers to individual evaluation of life in both affective and cognitive terms (Diener, 2000).

In examining wellbeing, two distinct approaches emerged: the hedonic tradition and the eudemonic tradition. The hedonic approach focuses on happiness, positive affect, low negative affect, and satisfaction with life (e.g., Diener, 1984; Kahneman et al., 1999). According to Di Fabio and Palazzeschi (2015), the hedonic approach is observed as subjective wellbeing, comprising a cognitive component of evaluation in terms of life satisfaction and an affective component characterised by the prevalence of positive rather than negative emotions. The eudemonic approach on the other hand focuses on positive psychological functioning and human development (e.g., Rogers, 1961; Ryff, 1989). Di Fabio and Palazzeschi (2015) state that, more specifically, the eudemonic approach is considered to be psychological wellbeing, with a focus on resources, strengths, and on life meaning, authenticity and purposefulness.

The philosophy underlying wellbeing can be viewed as salutogenic – as opposed to pathogenic (Strümpfer, 1990; Wissing, 2000). The term ‘salutogenesis’ was developed by Antonvosoky (1979) and refers to the origins of health. According to Van Lingen and de Jager (2011) who conducted a review of various definitions of wellbeing, some of the core concepts of the wellbeing concept include the following: a) a focus on optimising wellbeing or maximising potential, b) holism and a systemic view, c) non-prescriptiveness, d) subjectivity, e) a process view, f) an emphasis on self-responsibility.

Since Bradurn’s (1969) conceptualisation, several models of wellbeing have emerged as theorists added to its underlying philosophy (Van Lingen & De Jager, 2011). While each theorist offers varying contributions towards understanding, all agree that the physical, emotional, spiritual, social, intellectual and career domains of wellbeing are the most important contributors to overall wellbeing.

According to Van Lingen and De Jager (2011), the various domains are described as follows:

- Physical wellness: Five aspects are most often mentioned in literature with regards to physical wellness, namely regular physical activity, sound nutrition, limiting substance usage, taking responsibility for self-care and safety, and adequate rest and sleep.
- Emotional wellness: Included in this domain is the understanding and acceptance of emotions, the suitable expression of emotions, control over emotions, dominance of positive over negative emotional states, the appropriate management of stress, and a positive and realistic self-concept.

- Spiritual wellness: Within this domain, the aspects most referred to include connectedness to self, a higher power, or the universe; the manifestation of spiritual practices, the search for meaning and purpose, and the values and ethics that guide behaviour and decision-making.
- Social wellness: This includes establishing meaningful relationships, providing and receiving care, contributions for community good, tolerance of and respect for differences, and the realisation of interdependence with others.
- Intellectual awareness: This dimension includes curiosity and on-going learning, critical and independent thinking, innovation and creativity, and the ability to grasp concepts, reasoning and logic, as well as the application and understanding of knowledge.
- Career wellness: This includes suitability of chosen occupation, based on interests, skills and values, and the experience of satisfaction and fulfilment gained from work, the growth and enrichment gained from work, and the satisfaction gained from vocational life roles such as hobbies or community involvement.
- Environmental wellness: This maintenance of a lifestyle which minimises environmental harm, as well as involvement in socially responsible activities to promote the environment.

Rath, Harter, and Harter (2010) conclude that career wellbeing is probably the most important domain for people. The study of career or occupational wellbeing forms the basis and is of paramount importance to this study.

For the purposes of this study, the concept of occupational wellbeing will be studied through Warr's (1990, 2007) affective approach, which distinguishes arousal from pleasure. According to Warr (2007), affective wellbeing is widely considered to be at the core of wellbeing (Diener et al., 2009) and mental health (Keyes, 2005). The concept of affective wellbeing is conceptualised and discussed further below.

3.1.2 Affective Wellbeing

Job-related affective wellbeing is important for healthy life and job satisfaction for all individuals (Uncu, Bayram, & Bilgel, 2007). In specific terms, affective wellbeing is a multi-dimensional construct characterised by balance in one's positive (i.e. pleasant emotions) and negative (i.e., unpleasant emotions) affect, and one's overall satisfaction with life (Diener & Larsen, 1993; Diener & Ryan, 2009; Watson et al., 1998). According to Warr (1990), affective wellbeing refers to feelings about life generally (i.e. 'context-free') or affect in relation to a specific domain (i.e. 'job related' and 'facet-specific'). Warr

(1987, 1990) proposes that dimensions of affective work-related wellbeing include enthusiasm-depression (measured through engagement and burnout), anxiety-comfort (measured through occupational stress), and pleasure-displeasure (measured through job satisfaction). The focus of this study is affective wellbeing in relation to the specific ‘job-related’ domain. Table 3.1 below provides an overview of the differences between job-related, facet-specific and context-free affective wellbeing.

Table 3.1

Affective Wellbeing Axes of Measurement and Levels of Specificity (Warr, 1987, p. 47)

Affective Wellbeing			
Bipolar Axes	Context-free	Job-related	Facet-specific
Discontented-Contented	Happiness Life satisfaction General distress Negative Affect	Job satisfaction Job attachment	Specific satisfaction (with pay, amount of responsibility, etc)
Anxious-Comfortable	Anxiety Neuroticism	Job-related tension Job-related pleasure Resigned satisfaction	Specific feelings of job-strain
Depressed-Actively Pleased	Positive affect Depression Tedium Self-denigration	High morale Job boredom Job-related depression Job-related burnout	Specific aspects of job boredom, and learned helpfulness

Diener and Larsen (1993) and Warr (1994) suggest that measures of affective wellbeing are among the most important, if not the most important, indicator of psychological wellbeing. According to Wright and Cropanzano (2000), organisational research considers affective wellbeing as synonymous with happiness. Briner (1997), concludes that affective wellbeing retains the potential to capture subtleties, complexities and alterations in the experience of work that typical, one-dimensional measures may be incapable of capturing. Daniels (2000) suggests that there are several types of affective experiences, including boredom-enthusiasm, depression-pleasure, anger-placidity, and tiredness-vigour. Thus, affective wellbeing is a multi-dimensional construct.

Warr (1987, 1990) provides extensive reviews and examinations of the concept of affective wellbeing. According to Warr (1987, 1990), affective wellbeing is one component of mental health and is conceptually similar to the main medical criterion of “ill” or “not ill”. Warr (1987) further suggests that affective wellbeing be treated as two independent dimensions of “pleasure” and “activation” (Figure 3.1), and work-related affective wellbeing is presented across two axes: anxiety-contentment and depression-

enthusiasm (Warr, 1990). The latter axes parallel those of Watson and Tellegen (1985) who suggest that affect can be represented in a two-dimensional circular space or circumplex by two orthogonal factors, labelled negative affect and positive affect. According to Watson and Tellegen (1985), high negative affect presents through anxiety and hostility, whereas low negative affect is presents through calmness and relaxation. High positive affect is represented by a state of pleasant arousal (e.g. enthusiasm) and low positive affect is represented by a state of unpleasantness and low arousal (e.g. dull, sluggish) (Watson & Tellegen, 1985). Figure 3.1 below depicts the conceptualisation of job-related affective wellbeing as per Warr (1990).

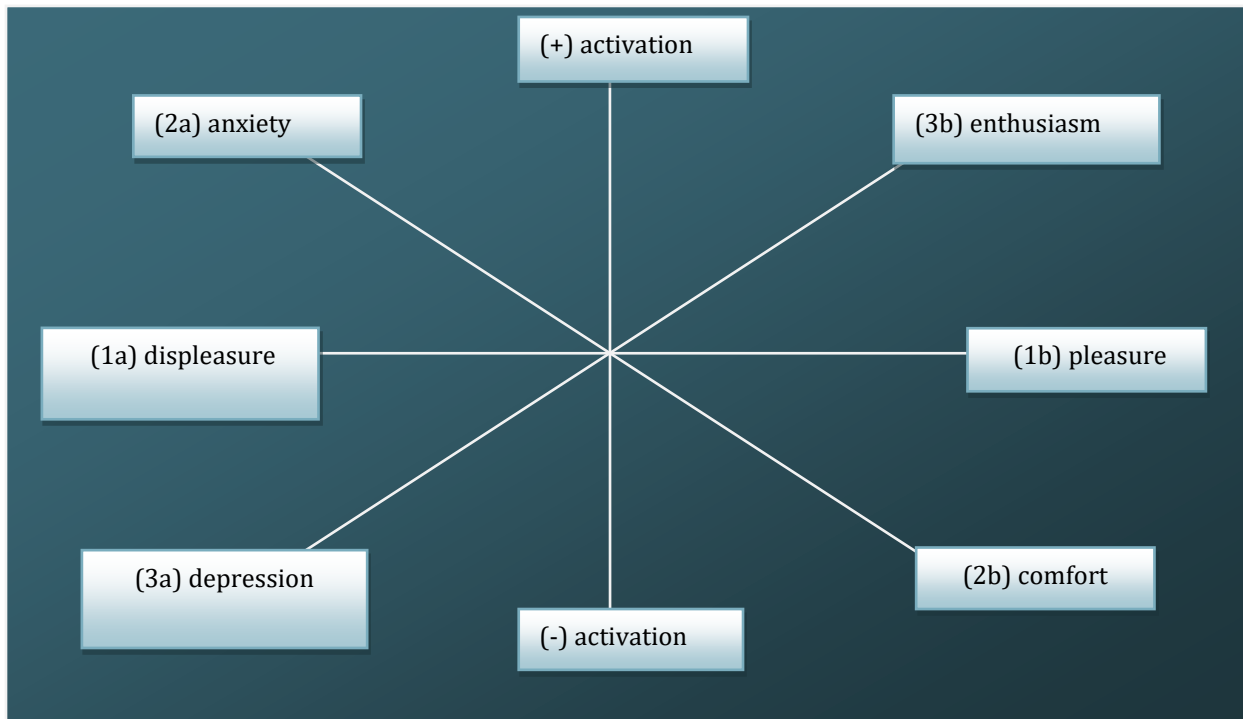


Figure 3.1: Conceptualisation of Job-Related Affective Wellbeing. (Warr, 1990).

3.1.3 Models of Wellbeing

Occupational wellbeing refers to the meaning that individuals derive from occupational lives (Doble & Santha, 2008) and is construed as a positive evaluation of various job aspects, including affective, motivational, behavioural, cognitive and psychosomatic dimensions (Van Horn, Taris, Schaufeli, & Schreurs, 2004). According to Maslach et al. (2001), occupational wellbeing comprises two constructs in a continuum with burnout at one end and engagement at the other. Hart and Cooper (2001) argue that occupational wellbeing includes both emotional and cognitive components. The emotional component is

conceptualised in terms of two independent dimensions of positive and negative affect (Watson, 1998), whilst cognitive components reflect judgement of individual satisfaction with work.

De Simone (2014) suggests that for many organisational scholars, studies on occupational wellbeing are derived from theories and models. The theories form the foundation thereof and introduce basic concepts for further study into wellbeing as an attempt to understand the reasons people behave in a particular way.

A discussion into some of the key models of wellbeing follow hereunder:

(a) Ryff's Model of Wellbeing

- Ryff (1989c) investigated psychological wellbeing in relation to development and growth, and subsequently developed a general, context-free model of wellbeing (Ryff, 1989c). Ryff (1989c) built on the multi-dimensional frameworks of positive psychological functioning proposed by Erikson (1959) and Maslow (1959), and presented a six-dimensional model of wellbeing, including the following dimensions:
- *Self-acceptance* – a positive evaluation of oneself and one's past life;
- *Environmental mastery* – the capacity to be able to effectively manage one's life as well as the surrounding world;
- *Autonomy* – refers to a sense of self-determination and the ability to oppose social pressures to think and behave in certain ways;
- *Positive relations with others* – this may be expressed by a genuine concern regarding the welfare of others;
- *Personal growth* – a sense of continued growth and development as a person as well as a willingness to try new things; and
- *Purpose in life* – the belief that one's life is purposeful and meaningful, and that one has something to live for (Ryff, 1989c).

The Ryff Scales of Psychological Wellbeing (RPWB) (Ryff, 1989c) was developed to measure these core dimensions. Although an extensive number of studies have been undertaken using the scale, the results regarding the factor structure of the RPWB are inconclusive (Henn, Hill, & Jorgensen., 2016).

(b) Warr's Model of Wellbeing

Unlike Ryff, Warr (1987, 1994) created a multi-dimensional model of investigating wellbeing, and placed emphasis on wellbeing within a particular context, namely that of work. Warr (1987, 1994) distinguishes between four primary dimensions (affective wellbeing, aspiration, autonomy and competence), and a secondary fifth dimension of integrated functioning which encompasses the four primary dimensions to reflect individuals as a whole. According to Danna and Griffin (1999), it is the primary dimensions which assess individual behaviour in relation to the work context. According to Van Horn et al., (2004), the fifth dimension of integrated functioning is interpreted as an "overall" evaluation encompassing the four primary dimensions. As aforementioned, the dimension on affective wellbeing may be conceptualised simply as the level of pleasure and activation (Warr 1994). Job-related aspiration assesses how stimulating or challenging the goals are which individuals set for their themselves (Warr, 1994). According to the model, those with high job aspirations tend to set difficult goals which are subsequently achieved (Warr, 1994). The dimension of autonomy refers to the extent to which individuals control personal behaviour, rather than simply following what is dictated through environmental cues and commands (Warr, 1994). The final primary dimension, competence, refers to an individual's ability to complete assigned tasks with some degree of success (Warr, 1994).

(c) A Multi-Dimensional Approach to Wellbeing

Van Horn et al. (2002) drew upon research of Ryff (1989) as well as Warr (1987) and created a comprehensive model of wellbeing specific to the work environment. Van Horn et al., (2002) proposed five dimensions of wellbeing: an affective component, professional wellbeing (or motivation), social wellbeing (behaviour), cognitive weariness, and psychomatic complaints. According to the latter model, the affective component is more differentiated than that of Warr (1994) as it includes emotional exhaustion, job satisfaction, and organisational commitment (Van Horn et al., 2002, 2004). The dimension of professional competence includes concepts of aspiration, professional competence and autonomy, social wellbeing distinguished between adequate social functioning in relation to others, cognitive weariness which is considered alongside to burnout, and finally, psychosomatic complaints which are observed as symptoms (Van Horn et al., 2002).

Table 3.2 demonstrates the three primary models of wellbeing as aforementioned.

Table 3.2

Overview of the Three Main Models of Wellbeing. (Van Horn et al., 2002)

Dimensions of Wellbeing	Ryff (1989)	Warr (1987, 1994)	Van Horn et al., (2002, 2004)
Affective wellbeing	<ul style="list-style-type: none"> • Self-acceptance 	<ul style="list-style-type: none"> • Affective wellbeing (anxiety, depression) 	<ul style="list-style-type: none"> • Affective wellbeing (positive and negative) • Commitment to work • (Lack of) emotional exhaustion
Professional wellbeing (motivation)	<ul style="list-style-type: none"> • Personal growth • Purpose in life • Autonomy 	<ul style="list-style-type: none"> • Aspiration • Competence • Autonomy 	<ul style="list-style-type: none"> • Aspiration • Autonomy • Competence
Social wellbeing (behaviour)	<ul style="list-style-type: none"> • Environmental mastery • Positive relations with others 		<ul style="list-style-type: none"> • (Lack of) depersonalization from those at work • Adequate social functioning from those at work
Cognitive wellbeing			<ul style="list-style-type: none"> • (Lack of) cognitive weariness
Psychosomatic wellbeing			<ul style="list-style-type: none"> • Lack of psychosomatic complaints

For purposes of this study, occupational wellbeing is viewed from the model offered by Warr (1987; 1994). The underlying rationale stems from the specific context of the work environment, which is also the focus of this study (Warr, 1987, 1994). In addition, Warr’s model on affective wellbeing is grounded in the original circumplex model of affect by Russell (1980) which is also the foundation of this study. The circumplex model is discussed in more detail hereunder.

3.1.4 The Circumplex Model

The original circumplex model of affect (Russell, 1980) and the circumplex model of occupational wellbeing (Bakker & Oerlemans, 2011) is discussed hereunder.

3.1.4.1 The Circumplex Model of Affect

Warr’s (1990) conceptualisation of job-related affective wellbeing stems from work by Russell (1980) who set out to define the structure of emotions through a dimensional approach, and subsequently proceeded to pioneer this approach. According to Russell (1980), the circumplex model of affect suggests that emotions are distributed in a two-dimensional circular space, which includes the dimensions of arousal (i.e. how intense emotions are), and valence (i.e. whether positive or negative). (See Figure 3.2.) The vertical axis in this model represents arousal, while the horizontal axis consists of valence (Russel, 1980).

This model is used successfully in order to determine affective states, emotions transmitted through facial expressions, and emotions conveyed through words (Remington, Fabrigar, & Visser, 2000).

According to Russell (1980), in a circumplex model, the similarity between affective states is established based on distance from one another on the perimeter of the circle (Figure 3.2). The model suggests that the closer two emotions are along this perimeter, the closer they are in similarity (Russell, 1980; Watson & Tellegen, 1985). The model further postulates that pairs of affective states that are separated by only a few degrees are positively correlated (Russell, 1980; Watson & Tellegen, 1985). At a 90-degree separation, emotions are presumed uncorrelated, and when approaching 180 degrees, affective states are considered negatively correlated to one another (Russell, 1980; Watson & Tellegen, 1985).

Figure 3.2 hereunder illustrates the original circumplex model of affect by Russell (1980).

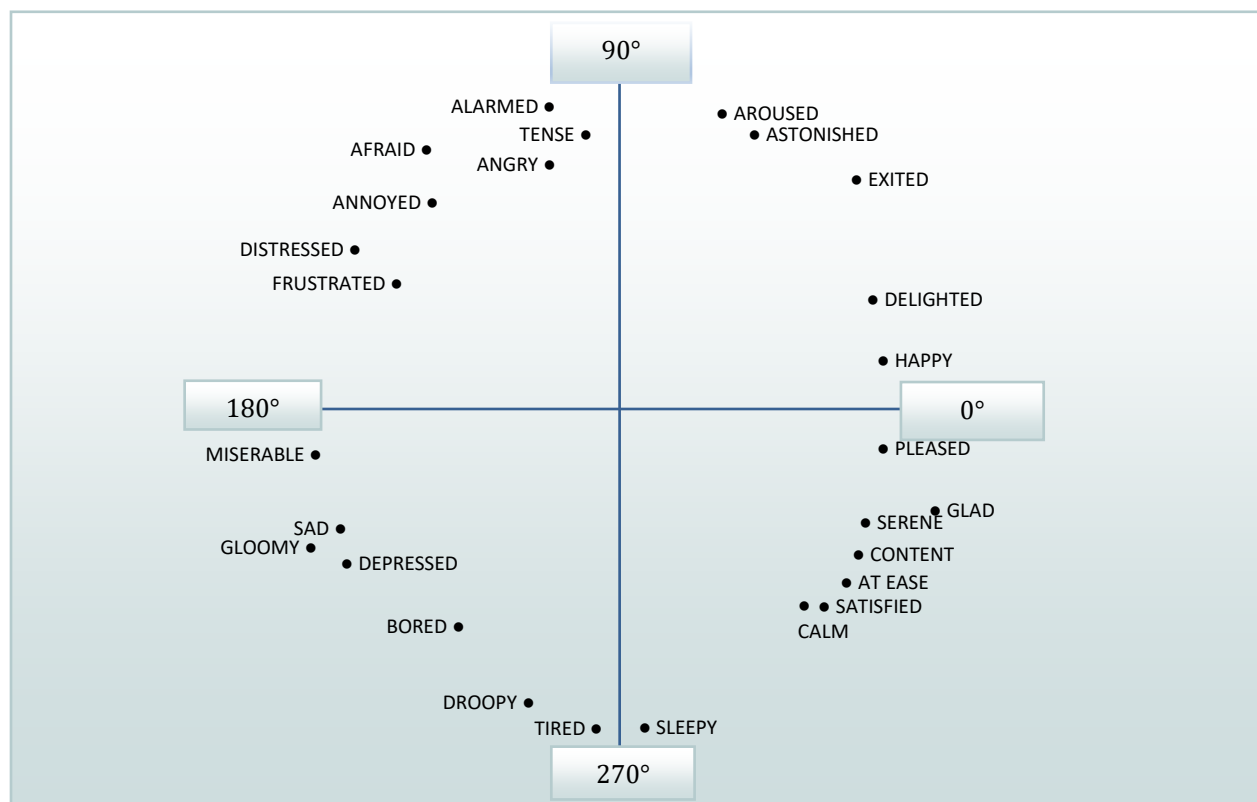


Figure 3.2. The Original Circumplex Model of Affect. Emotions are posed in circularly space. Source: Russell (1980, p. 1168).

According to Russell (1980), the circumplex model of affective states describes four affective quadrants labelled as HAPA (high-activated positive affect or “enthusiasm”), situated in the top-right quadrant;

HANA (high activated negative affect or “anxiety”), situated in the top-left quadrant; LAPA (low-activated positive affect of “comfort”), situated in the bottom-right quadrant; and LANA (low-activated negative affect or “depression”), situated in the bottom-left quadrant. A common variant of this model is introduced by Warr (1987; 1990).

3.1.4.2 Circumplex Model of Occupational Wellbeing

The circumplex model of emotions (Russell, 1980; Warr, 1994) is applied in the context of occupational health psychology (Mäkikangas et al., 2015). According to Bakker and Oerlemans (2011) wellbeing in the occupational context generates significant interest and the researchers therefore argue that four different states of occupational wellbeing - burnout, work engagement, workaholism and job satisfaction - can be placed in the two-dimensional space comprised of activation and pleasure (i.e. the circumplex model of emotions).

Bakker and Oerlemans (2011) propose an attractive circular structure (as depicted in Figure 3.3 hereunder), representing the four wellbeing indicators in the context of occupational health psychology. According to Bakker and Oerlemans (2011), the four occupational wellbeing concepts represent different states of pleasantness and activation (Russell, 1990; 2003) used to describe the multifaceted nature of employee wellbeing. An axis runs from pleasure and positive emotion, such as feeling happy and calm, to displeasure, such as feeling tense and sad (Bakker & Oerlemans, 2011; Russell, 1980, 2003). According to Bakker and Oerlemans (2011) every dimension (burnout, work engagement, workaholism and job satisfaction) has a distinct affective state pattern, allowing for plotting variables along the circumference. Job satisfaction and work engagement both appear on the pleasure side of the circumplex, whilst workaholism and exhaustion appear on the displeasure side (Bakker & Oerlemans, 2011).

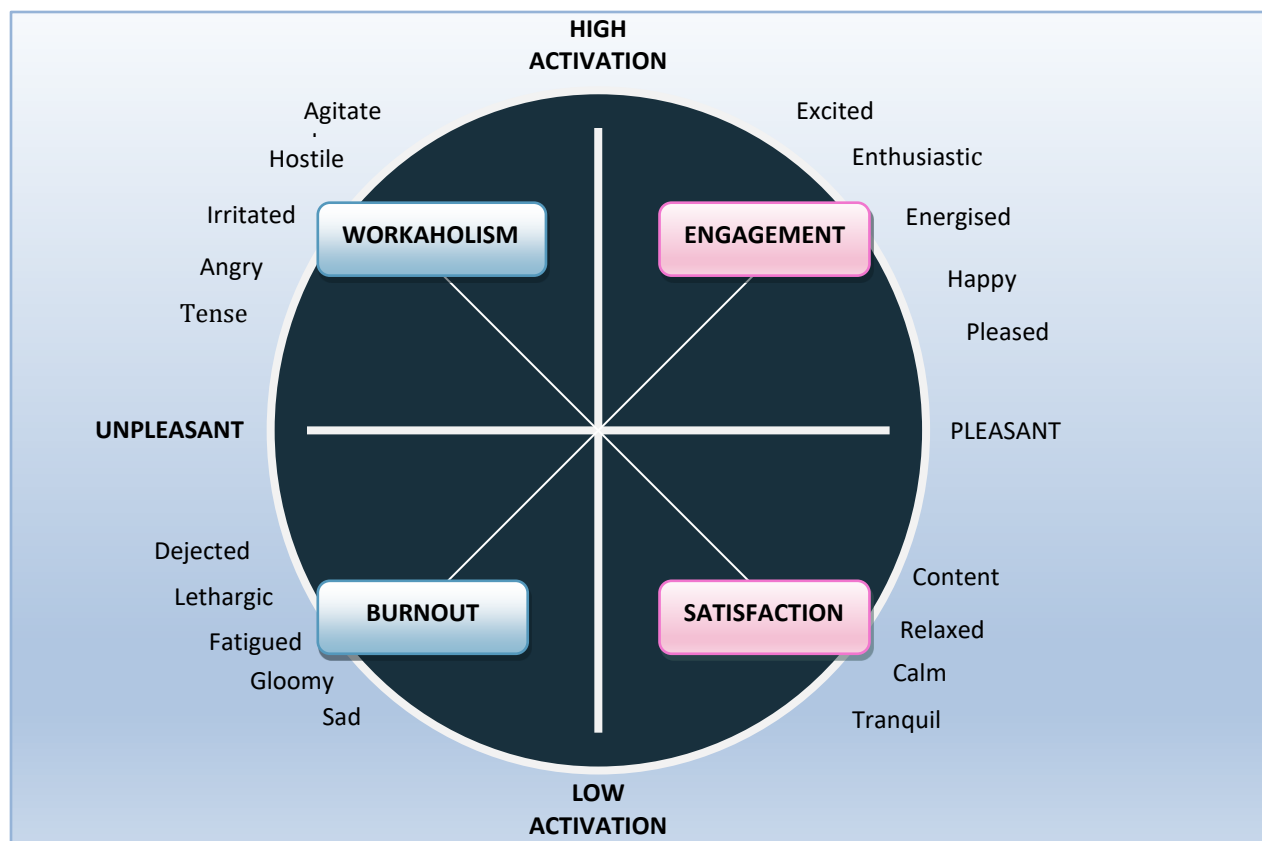


Figure 3.3: Two-dimensional view of subjective wellbeing indicating affects of work attitudes.
Source: Bakker and Oerlemans (2011).

Few studies focus on the empirical exploration of the various quadrants of the adapted circumplex model (Bakker and Oerlemans, 2011), while only two known studies focused on all four simultaneously (Mäkikangas et al., 2015; Salanova et al., 2014). The current study focuses on all four quadrants and will therefore be a replication of the study by Mäkikangas et al. (2015) and Salanova et al. (2014) to some degree. However, the addition of a unique nomological net in the form of the psychosocial antecedent variables, the prediction of the positive and negative outcomes, as well as the setting of the South African healthcare industry, makes this research unique in its approach. The four quadrants or states (burnout, work engagement, workaholism and job satisfaction) are conceptualised and discussed further hereunder.

3.2 EMPLOYEE WELLBEING ATTRIBUTES

This research focuses on a set of wellbeing attributes, identified in the circumplex model of wellbeing as aforementioned. Such attributes include burnout, work engagement, workaholism and job satisfaction. Each of the attributes are conceptualised and discussed hereunder.

3.2.1 Conceptualisation of Burnout

Since the introduction of burnout in 1974, the concept has since been well documented in literature (Freudenberger, 1974, 1975, 1982, 1983, 1985; Maslach, 1976; Maslach & Jackson, 1977, 1982, 1986; Schaufeli & Enzmann, 1998), along with numerous definitions of burnout. Herbert Freudenberger (1974) is widely considered as the founding father coining the concept of burnout. Freudenberger (1974) originally describes the state of being burned out as “becoming exhausted by making excessive demands on energy, strength, or resources” in the workplace (Freudenberger, 1974:159). According to Freudenberger (1974) burnout is characterised by physical symptoms such as exhaustion fatigue, frequent headaches, gastrointestinal disorders, sleeplessness, and shortness of breath. The behavioural signs of burnout include frustration, anger, a suspicious attitude, a feeling of importance or overconfidence, excessive use of tranquilisers and barbiturates, cynicism, and signs of depression (Freudenberger, 1974). At its earlier stage, burnout was predominately identified within the human services sector. However, by the late 1980s, researchers and practitioners began to recognise that burnout also occurred among managers, entrepreneurs, and white- and blue-collar workers (Schaufeli, Maslach, & Leiter, 2008).

The concept of burnout is extensively researched by Maslach and Jackson (Maslach, 1978a, 1978b, 1982a, 1982b, 1982c; Maslach & Jackson, 1979, 1981, 1982, 1984a, 1984b), and it is for this reason that the most commonly cited definition of burnout derives from Maslach and Jackson’s (1986) tripartite definition as it is considered to be the most comprehensive. The authors define burnout as a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment (Maslach & Jackson, 1986). Schaufeli and Enzmann (1998, p. 36) define burnout as “a persistent, negative, work-related state of mind in ‘normal’ individuals that is primarily characterised by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work”. Accordingly, exhaustion is identified as the main indicator of burnout, and sense of reduced effectiveness is seen as the accompanying system (Schaufeli & Enzmann, 1998). The authors further identify three additional symptoms, namely distress, decreased motivation, and dysfunctional

attitudes and behaviours in the work environment (Schaufeli & Enzmann, 1998).

While the literature identifies a plethora of definitions, there exists a common thread shared by all. First, it is agreed that burnout occurs at the individual level. Second, it is agreed that burnout is an internal psychological experience involving feelings, motives and expectations. Third, it is agreed that burnout is a negative experience for the individual concerning problems, distress, comfort, dysfunction and/or negative consequences (Maslach, 1982). This study views burnout through the lens of Schaufeli and Enzmann (1998) who define burnout as a persistent, negative, work-related state among normal individuals which is primarily characterised by exhaustion, accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours in the workplace (1998, p. 36).

Through the conceptualisation of burnout, the concept comprises three dimensions, namely emotional exhaustion, depersonalisation, and a lack of personal accomplishment (Maslach & Jackson, 1986; Van der Colff & Rothmann, 2009). Authors Asiwe et al. (2014), who developed the burnout scale used in this study, did not offer a unique definition to burnout in their study as they too viewed burnout as a three-dimensional construct that consists of a physical, cognitive and emotional component. The following three dimensions have achieved great consensus on the topic of burnout in the literature, and are discussed in further detail below:

- *Emotional exhaustion*

Emotional exhaustion is considered at the core of burnout and is characterised by emotional depletion and loss of energy (Salvagioni et al., 2017). According to Maslach (1998), emotional exhaustion refers to feelings of being emotionally extended and depleted of emotional resources. Demerouti (2005) notes that individuals who experience emotional exhaustion tend to feel overwhelmed and do not feel they possess the resources required to meet job demands. According to Roothman (2010), the Oldenburg Burnout Inventory (OLBI) extends the concept of emotional exhaustion to include items which reflect physical, affective and cognitive strain. The concept includes symptoms such as feelings of emptiness, physical exhaustion, and desperate need to rest (Demerouti et al., 2000).

- *Depersonalisation*

Depersonalisation is described by Salvagioni et al. (2017) as dehumanisation, and is regarded as detachment from work, clients, and emotional hardening. Maslach (1998) describes depersonalisation as a negative, cynical or excessively detached response to others, resulting in a loss of idealism. Maslach (1998) states that idealism often develops in response to an overload of emotional exhaustion, and is regarded as self-protective at first; an emotional buffer or detached concern. According to Demerouti et al. (2000), depersonalisation comprises negative and cynical attitudes and/or detachment from clients. Roothman (2010) notes that the Oldenburg Burnout Inventory extends the concept to include detachment from clients as well as from one's work or work content.

- *Lack of Personal Accomplishment*

According to Salvagioni et al. (2017), lack of personal accomplishment refers to reduced personal accomplishment or inefficacy, further regarded as a feeling of personal or professional inadequacy, as well as reduced productivity and coping skills. Maslach (1998) states that reduced or decreased personal accomplishment refers to a decline in feelings of competence and productivity at work. Demerouti et al. (2000) considers a lack of personal accomplishment as negatively evaluating one's work and experiencing feelings of inadequacy.

Viljoen (2012) indicates that over time, different opinions on the development and sequence of the abovementioned burnout dimensions exist. Golembiewski, Munzenrider, and Stevenson (1986) state that burnout starts with feelings of depersonalisation and such feelings consequently result in a lack of personal accomplishment and emotional exhaustion. Conversely, Leiter and Maslach (1998) argue that an individual first experiences the emotional exhaustion which leads to depersonalisation and develops a low sense of accomplishment only subsequently.

The following section will unpack how work engagement is conceptualised both in literature and in this study.

3.2.2 Conceptualisation of Work-Engagement

Khan (1990) first defined engagement at the work level. Khan (1990, p. 694) defines work engagement as "the harnessing of organisation members' selves to their work roles". Kahn (1990) directed attention to the fact that in work engagement, people employ and express themselves physically, cognitively and

emotionally during role performances. According to Kahn (1990, 1992), engagement refers to being psychologically present when occupied with and performing an organisational role. Since then, employee engagement has grown to become an extensively used and popular term (Robinson et al., 2004). Accordingly, several definitions of engagement are derived from practice, as well as research-driven studies.

Burnout researchers define engagement as the opposed or positive antithesis of burnout (Maslach et al., 2001). Maslach and Leiter (1997) emphasise that the fundamentals of work engagement (energy, involvement, and efficacy) are the direct opposites of the three dimensions of burnout (emotional exhaustion, cynicism and professional efficacy). Therefore, engaged employees feel energetic (ready to commit time and effort), involved (find work activities meaningful) and have a sense of accomplishment, which is gained from work activities. This view is supported by González-Romá et al. (2006), whose research on burnout and engagement concluded that the core dimensions of burnout (exhaustion and cynicism) and engagement (vigour and dedication) oppose one another (González-Romá et al, 2006).

Similarly, Schaufeli et al. (2002, p. 74) define engagement “as a positive, fulfilling, work-related state of mind that is characterized by the dimensions of vigour, dedication, and absorption.” The three dimensions of work engagement proposed by Schaufeli et al. (2002) are vigour, dedication and absorption, and are defined as:

- *Vigour*

Vigour refers to a readiness to dedicate effort and energy to remaining purposeful in the face of difficulty or failure (Chughtai & Buckley, 2008). According to Schaufeli (2004) and Schaufeli et al. (2008), in the work context, vigour is characterised by high levels of energy and mental resilience while working, and the willingness to invest effort into one’s work, as well as persistence in the face of adversity (Schaufeli et al., 2002).

- *Dedication*

Dedication refers to a strong identification with and feelings towards a job, as well as an employee pouring themselves into a job (Chughtai & Buckley, 2008; Schaufeli et al., 2002; Schaufeli, 2004). Schaufeli et al. (2002) further suggests that dedication represents a personal sense of significance, enthusiasm,

inspiration, pride, and challenge on the job. Geldenhuys, Laba, and Venter (2014) state that a further symptom of this dimension is psychological involvement in the job.

- *Absorption*

Absorption refers to a cognitive component and is characterised by individuals being entirely engrossed in work; completely focused in work and feeling satisfaction and total involvement in work performance (Chughtai & Buckley, 2008; Geldenhuys et al., 2014; Schaufeli et al., 2002; Schaufeli, 2004).

It is submitted that engagement is not a momentary and specific state, but rather, it is “a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behaviour” (Schaufeli et al., 2002, p. 74). In line with this thinking, Bakker et al. (2008) and Schaufeli and Bakker (2010) define work engagement as elevated levels of energy and involvement. According to Schaufeli and Bakker (2003), work engagement is observed as a pervasive, affective and cognitive state, and is not targeted at any object, individual, event or behaviour. Schaufeli and Bakker (2004) further note that work engagement signifies a motivational process, primarily driven by the accessibility of resources. Thus, work engagement flourishes when both job and personal resources are attainable.

May et al. (2004) conceptualises engagement by emphasising the importance of people contributing physical, emotional and cognitive resources to assist with role-related tasks when engaging themselves in the workplace. The majority of jobs tend to require a certain degree of physical exertion and challenges, together with emotional and cognitive demands, all of which differ by job role and person. According to Schaufeli et al. (2002), engaged employees are inclined towards having both energetic and affective connections with work tasks, and are consequently able to successfully deal with the pressures of job roles. The abovementioned definitions provide a fairly composite view of work engagements as positivistic, mentally enduring state which fosters feelings of resilience, inspiration, happiness or confidence.

For purposes of this study, work engagement is defined as “a positive, fulfilling, work-related state of mind characterised by vigour (i.e. high levels of energy and mental resilience while working, the willingness to invest effort into one’s work and persistence also in the face of difficulties), dedication (i.e. a sense of significance, enthusiasm, inspiration, pride, and challenge), and absorption (i.e. being fully concentrated and engrossed in one’s work whereby time passes quickly and one has difficulties with detaching oneself

from work)” (Bakker et al., 2008, p. 187)

Throughout time, many engagement theories and approaches to work engagement have emerged in the literature. The work of Kahn (1990) and Maslach, et al. (2001) gave rise to the leading engagement theories (Shuck & Wollard, 2010). Thus, four major approaches to engagement emerged, which aim to account for and define engagement. According to Shuck (2011), the four approaches are a) the needs-satisfying approach; b) the burnout-antithesis approach; c) the satisfaction-engagement approach; and d) the multidimensional approach.

- *Personal engagement: The Needs-Satisfying Approach*

This approach resonates strongly with Khan’s (1990) approach to work engagement. According to Kahn (1990, p. 694), in the engaged state, “people employ and express themselves physically, cognitively, emotionally and mentally during role performances”. Conversely, in the disengaged state, employees tend to hide, withdraw and suppress true nature in completing job tasks, their true identity, thoughts, and feelings in defence of themselves (Kahn, 1990; May et al., 2004). According to Shuck (2011), though this approach is vital for a theoretical understanding of engagement, it has rarely been used in empirical research (e.g. May et al., 2004).

- *Work engagement/burnout: The Burnout-Antithesis Approach*

According to Schaufeli (2013), this approach is rooted in occupational health psychology and views work engagement as the positive antithesis of burnout. The latter approach stems from two schools of thought. First, according to Maslach and Leiter (1997), engagement and burnout are the positive and negative endpoints of a single continuum. More specifically, engagement is characterised by energy, involvement and efficacy. According to Maslach and Leiter (1997), such dimensions are considered direct opposites of the three-burnout dimensions of exhaustion, cynicism and lack of accomplishment. This suggests that those who rank high on engagement will consequently rank inescapably low on burnout, and vice versa. The second and alternate view considers work engagement a distinct concept that is negatively related to burnout (Schaufeli, 2013). Shuck (2011) suggests that a major criticism of this approach is its focus on the burnout continuum, and as a result, the lack of cognitive aspects of engagement as was originally described by Kahn (1990).

- *Employee Engagement: The Satisfaction-Engagement Approach*

This approach stems from the Gallup Organisation. According to the Gallup Organisation, employee engagement “refers to an individual’s involvement and satisfaction with as well as an enthusiasm for work” (Harter, Schmidt, & Hayes, 2002, p. 269). As can be noted from the Gallup Group’s definition of engagement, the concept appears to overlap with traditional constructs such as job involvement and job satisfaction (Shuck, 2011). According to Harter et al. (2002), the satisfaction-engagement approach has influenced academia meaningfully, since the Gallup Group’s research established significant links between employee engagement and business unit outcomes, including customer satisfaction, profit, productivity and turnover.

- *The Multidimensional Approach*

This approach stems from Saks’ (2006) definition of employee engagement. Saks (2006, p. 602) defines employee engagement as “a distinct and unique construct consisting of cognitive, emotional, and behavioural components that are associated with individual role performance”. According to Schaufeli (2013), this definition shares similarities with that of Kahn (1990) as it also places an emphasis on role performance at work. The innovative characteristic of this approach is that Saks (2006) differentiates between “job engagement” (performing the work role) and “organisational engagement” (performing the role as a member of the organisation) (Schaufeli, 2013). Furthermore, although both are moderately related ($r = 0.62$), each appear to have different antecedents and consequences. Despite its intuitive appeal, the multidimensional approach (i.e., the distinction between job and organisational engagement) has hardly been considered by the research community (Schaufeli, 2013).

According to Shuck (2011), taken together, all four approaches emphasise a different feature of engagement: (1) its relationship with role performance; (2) its positive nature in terms of employee wellbeing as opposed to burnout; (3) its relationship with resourceful jobs; and (4) its relationship with both the job, as well as the organisation.

The most widely accepted and used theory in research on work engagement is the Social Exchange theory (Saks, 2006). According to Saks (2006, p. 603) “a strong theoretical rationale for explaining employee engagement can be found in social exchange theory (SET)” which is based on reciprocity. What this means, is that employees who perceive high organisational support are more likely to reciprocate with increased levels of engagement in work roles and in the organisation (Saks, 2006). According to Saks (2006),

employees who possess jobs which fulfil a lot of the job characteristics would be more willing to reciprocate with greater job engagement, and those employees who have higher perceptions of procedural justice would be more likely to reciprocate with greater organisational engagement. The central tenet of the social exchange theory is that people make social decisions based on perceived costs and benefits (Cropanzano & Mitchell, 2005). According to Andrew and Sofian (2012), the theory provides a theoretical foundation to justify why employees decide to engage more or less on their work or remain with the organisation.

As aforementioned, a unique theoretical framework for work engagement does not exist. Instead, a number of theoretical perspectives are proposed which each highlight a different facet, but which cannot be integrated into one overarching conceptual model.

3.2.3 Conceptualisation of Workaholism

The concept workaholism was first coined by Oates (1971) to bring to light that some individuals have a strong urge to work compulsively on the job. According to Oates (1971, p. 11), workaholism may be defined as “an addiction to work, the compulsion or uncontrollable need to work incessantly”. Oates (1971) states that workaholics enjoy it when work becomes exaggerated and presents a health danger, personal happiness, interpersonal relations, and social functioning. Since the original definition of the term workaholism, many other definitions have subsequently emerged in literature, as the term is becoming increasingly popular in the rapidly changing working world (Schaufeli et al., 2008). However, it should be noted that no single definition or conceptualisation of this phenomenon exists.

To understand the concept of workaholism, it is important to be cognisant of the fact that there are three main alternative views that have all defined workaholism differently: the positive view, the negative view, and the existence of different types of workaholics. Workaholism is observed in positive terms by researchers. Moster (1993) views workaholism as an approach or attitude towards working, as opposed to the amount of time spent at work. According to Moster (1993), workaholics continue to think about work even when not working. Cantarow (1979) states that workaholics look for energetic inclusion and satisfaction through their work and job creativity may be viewed as a component of a workaholic’s character. Contrastingly, workaholism may also be viewed in a negative light. Cherrington (1980) states that workaholism is an irrational commitment to excessive work. Authors such as Cherrington (1980), Oates (1971), and Robinson (2002) equate workaholism with other addictions and choose to focus on the

adverse aspects.

Finally, researchers have proposed the existence of varying workaholic behaviour, known as approaches or dimensions of workaholism. Naughton (1980) was the first to present a typology of workaholism based on the dimensions of career commitment and obsessive-compulsive tendencies. According to Naughton (1980), job-involved workaholics (high work commitment, low obsession compulsion) are assumed to perform well in demanding jobs and be highly satisfied and will tend to reduce interest in non-work activities. Compulsive workaholics (high work commitment, high obsession-compulsion) are assumed to be potentially poor performers (staff issues stemming from impatience and ritualised work habits).

Spence and Robbins (1992) regard workaholism as an addiction. According to the researchers, workaholics feel determined or obligated to work as a result of internal weights that cause the individual to feel troubled about not working. Driven Spence and Robbins' (1992) definition stems from the perception of a 'workaholic triad' comprising three properties: work involvement, a feeling of being compelled to work, as well as work enjoyment. Spence and Robbins (1992) note that workaholics rank high on work involvement, as well as feelings of being compelled to work, and consequently low on work enjoyment. Conversely, work enthusiasts' score high on work involvement and work enjoyment, and low on the compulsion to work. Enthusiastic workaholics score high on all three components (Spence & Robbins, 1992).

Scott, Moore, and Miceli (1997) identify three types of workaholism patterns: compulsive-dependent, perfectionist, and achievement-orientated. According to the authors, compulsive-dependent is positively related to levels of anxiety, stress and physical and psychological problems, and is negatively related to job performance and life satisfaction. Perfectionist workaholism, which is when inadequate opportunities exist in order for the workaholic to gain control, is supposed to positively relate to levels of stress, physical and psychological problems, and hostile interpersonal relationships, as well as voluntary turnover and absenteeism. It is also negatively related to job satisfaction and performance (when the job requires overview and perspective) (Scott et al., 1997). Lastly, achievement-orientated workaholism is positively related to job and life satisfaction (when there are organisational rewards for achievement and personal demands are low), physical and psychological health, job performance, and pro-social behaviour. Moreover, it is negatively related to stress and voluntary turnover (Scott et al., 1997). Table 3.3 below summarises the three main views pertaining to workaholism.

Table 3.3

The three main views concerning workaholism (Harpaz & Snir, 2009)

Workaholism as a positive phenomenon	Workaholism as a negative phenomenon	Existence of different types of workaholics
Workaholism is derived from the love of work (Cantarow, 1979)	Workaholism is an irrational commitment to excessive work (Cherrington, 1980)	Job involved, compulsive (Naughton, 1987) Workaholic, enthusiastic workaholic (Spence & Robbins, 1992)
Workaholism is an intrinsic desire to work long and hard (Machlowitz, 1980)	Workaholism is an addiction (Oates, 1971; Robinson, 1992)	Compulsive-dependent, perfectionist, achievement orientated (Scott <i>et al.</i> , 1997)

Scott (1997) concludes that although defined differently, virtually all definitions of the concept assume that workaholics; 1) spend a great amount of time on work activities when they are given the discretion to do so, meaning that they are excessively hard workers; 2) are hesitant to disengage from work activities and they often think about work when they are not there, meaning they are obsessed workers; and 3) work beyond what is reasonably expected from them in order to meet organisational or economic obligations. This study views workaholism as a strong inner, compulsive drive to work excessively hard (Schaufeli et al., 2008). The final employee wellbeing attribute investigated in this study, job satisfaction is conceptualised and discussed below.

3.2.4 Conceptualisation Job Satisfaction

Job satisfaction is conceptualised by means of theories, perspectives, and approaches. With regard to theories, early conceptualisations of job satisfaction emerged in theories of work motivation by Maslow (1943), Vroom (1964) and Herzberg, Mausner, and Snyderman (1959). Anderson et al. (2001), added that job satisfaction theories can be loosely classified into three categories: situational theories which postulates that job satisfaction stems from the nature of one's job or aspects of the work environment; dispositional approaches which presuppose that job satisfaction is closely related to an individual's personality; and interactive theories which suggest that job satisfaction leads from the interplay of the situation and personality.

Perspectives on job satisfaction include the affective perspective (Locke 1969), referring to the positive emotional state experienced by individuals when evaluating their job or job experiences; the person-environment perspective (Dawis & Lofquist, 1993), which refers to job satisfaction as an attitude resulting from the correspondence between individual abilities and the requirements of the job; and the

dispositional perspective (Staw & Cohen-Charash, 2005), which regards job satisfaction as the reflection of a biologically based trait predisposing individuals to focus on positive or negative life aspects.

To further assist in understating the various types of job satisfaction, approaches to job satisfaction have emerged over time. The latter approaches are discussed below.

- *Task characteristics approach*

This perspective suggests that task characteristics are related to employee attitudes and describes jobs by the five perceived core dimensions of autonomy, feedback from the job, job variety, task identity, and task significance (Hackman & Oldham, 1975). According to Hackman and Oldman (1975), the latter five dimensions also influence the mediating psychological states of experienced meaningfulness, experienced responsibility, and knowledge of results.

- *Social information processing approach*

This approach has been proposed as an alternative to the task characteristics approach (Salancik & Pfeffer, 1978). According to Salancik and Pfeffer (1978), this approach relies on the premise that job attitudes are determined by social cue, which are developed in the work environment. The relationship between job characteristics and job attitudes stems from the fact that both are the consequences of the prevailing normative and informational structure of the work setting (Pfeffer, 1991).

- *Dispositional approach*

According to Staw and Ross (1985), the dispositional approach involves measuring personal characteristics used to explain individual attitudes and behaviours. Staw and Ross (1985) posit that dispositions, as a general category, include both stable individual characteristics (predispositions) as well as temporary moods (affective states). Such dispositions, according to Staw, Bell, and Clausen (1986), result in employee's interpreting information in line with a way that symbolises that disposition, and subsequently causes the employee to experience job satisfaction or dissatisfaction as a result. The dispositional approach to studying job satisfaction argues that an individual's disposition may be just as significant as the workplace characteristics in determining attitudes about the workplace (Staw & Ross, 1985).

- *Combined or integrated approach*

Griffin, Bateman, Wayne, and Head (1987) combined task characteristics models with the social information-processing model and proposed a combined or integrated approach. According to this

viewpoint, job enrichment and social cues may combine to influence perceptions and attitudes (Griffin et al., 1987). A laboratory study conducted by the authors supports this perspective. This perspective is similar to an earlier perspective proposed by Graen and Ginsburgh (1977).

According to Judge, Bono, and Locke (2000), job satisfaction is the most widely investigated job attitude, as well as one of the most extensively researched subjects in industrial and organisational psychology. As such, a plethora of definitions of job satisfaction exist, some of which contrast in nature.

One of the first definitions of job satisfaction forwarded by Locke (1976, p. 1304) is “a pleasant or positive emotional state resulting from the appraisal of one’s job or job experiences”. Locke’s definition utilises both cognition (appraisal) and affect (emotional state), and therefore assumes that job satisfaction results from the interplay of cognition and affect, or thoughts and feelings. It is argued that this is one of the most popular and generally accepted definitions of job satisfaction (Saari & Judge, 2004). Several definitions of job satisfaction have subsequently emerged in the literature. Warr, Cook, and Walls (1979, p. 133) conceptualises job satisfaction as “the extent to which an employee is satisfied with the intrinsic (the job itself) and extrinsic (work conditions) aspects of the job”. Accordingly, this definition views the job holistically, rather than focusing on particular facets or aspects of a job (Warr et al., 1979).

Schermerhorn, Hunt, and Osborn (2005) define job satisfaction as an affective or emotional response to various aspects of an employee’s work. The authors emphasised that likely causes of job satisfaction include status, supervision, co-worker relationships, job content, remuneration, extrinsic rewards, promotion, physical conditions of the work environment, as well as organisational structure. According to Spector (1997:2) job satisfaction is a construct which describes, “how people feel about their jobs and different aspects of their jobs”. Rothmann (2002) states that job satisfaction be viewed as a global and multidimensional construct. As a global construct, job satisfaction refers to individuals’ overall job satisfaction (Rothmann, 2002; Yalabik et al., 2013). As a multidimensional construct, job satisfaction refers to an individuals’ satisfaction with pay, company policies and supervisory practices (Mafini & Dlodlo, 2014; Robyn & du Preez, 2013; Rothmann, 2002). Burke (2004) defines job satisfaction as an attitude; the attitude which people have towards work.

Subsequent to the literature review, the most widely used definitions of job satisfaction in literature are summarised in Table 3.4 as follows.

Table 3.4

Overview of the most widely used definitions of Job Satisfaction

Author	Definition
Locke (1976)	A pleasurable or positive emotional state resulting from an appraisal of one's job or job experiences
Hackman and Oldham (1975) Spector (1997)	One's affective reactions to his/her job How people feel about their jobs and different aspects of their jobs
Weiss (2002)	A positive (or negative) evaluative judgment one makes about one's job or job situation

Despite the selection of definitions available, job satisfaction is widely considered an overall feeling about the job (global measure) or a feeling related to certain aspects of the job, referred to as facet measure (Spector, 1997). The facet approach to job satisfaction focuses on particular aspects of the job such as supervision, relationship with superiors or co-workers, or pay.

For purposes of this study, job satisfaction is conceptualised by the definition of Locke (1976) who defines job satisfaction as a pleasurable or positive emotional state, which stems from appraisal of job experience. Implicit in this definition is that job satisfaction encompasses both cognitive (appraisal of one's job) and affective (emotional state) elements. Furthermore, in this study, the focus will be on the overall perception of job satisfaction as opposed to the facets (i.e. cognitive and affective elements).

3.3 Relationship Between Employee Wellbeing Attributes and Occupational Wellbeing

The relationship between each of the employee wellbeing attributes (burnout, work engagement, workaholism and job satisfaction) and occupational wellbeing is discussed below.

3.3.1 Burnout and Occupational Wellbeing

Maslach and Jackson (1981) state that burnout is a specific and severe form of disturbed job-related wellbeing which was originally primarily observed in human service professionals. Over the years, the effect of burnout on worker wellbeing gained increasing attention, especially among organisational researchers and administrators, and for two chief reasons (Burton, 2010). According to Burton (2010), the first reason is due to the ethical responsibility on organisational leaders to protect the wellbeing of

employees in the workplace. The second reason is due to the impact that worker wellbeing has on an employee's performance, which may subsequently shape service provision and client outcomes, as well as psychological, physical, and behavioural health and work performance (Burton, 2010).

Job burnout poses a risk to the affective or psychological, physiological, and behavioural wellbeing of workers (Leiter & Maslach, 2001). According to Leiter and Maslach (2001), the mechanisms through which burnout is theorised to affect worker wellbeing is best explained as stemming from the exhaustion of the burned-out individual's personal resources, which subsequently results in a decline in one's affective, psychological, physical, or behavioural state. As a result, the expenditure of energetic resources transpires as workers are forced to manage with chronic stress and feelings of exhaustion, which subsequently leads to feelings of fatigue and psychological erosion (Leiter & Maslach, 2001). Lizano (2015) summarised the effects of job burnout on worker wellbeing through the use of a conceptual model (Figure 3.4) illustrating the effects of each of the burnout dimensions on one's affective or psychological, physiological and behavioural level.

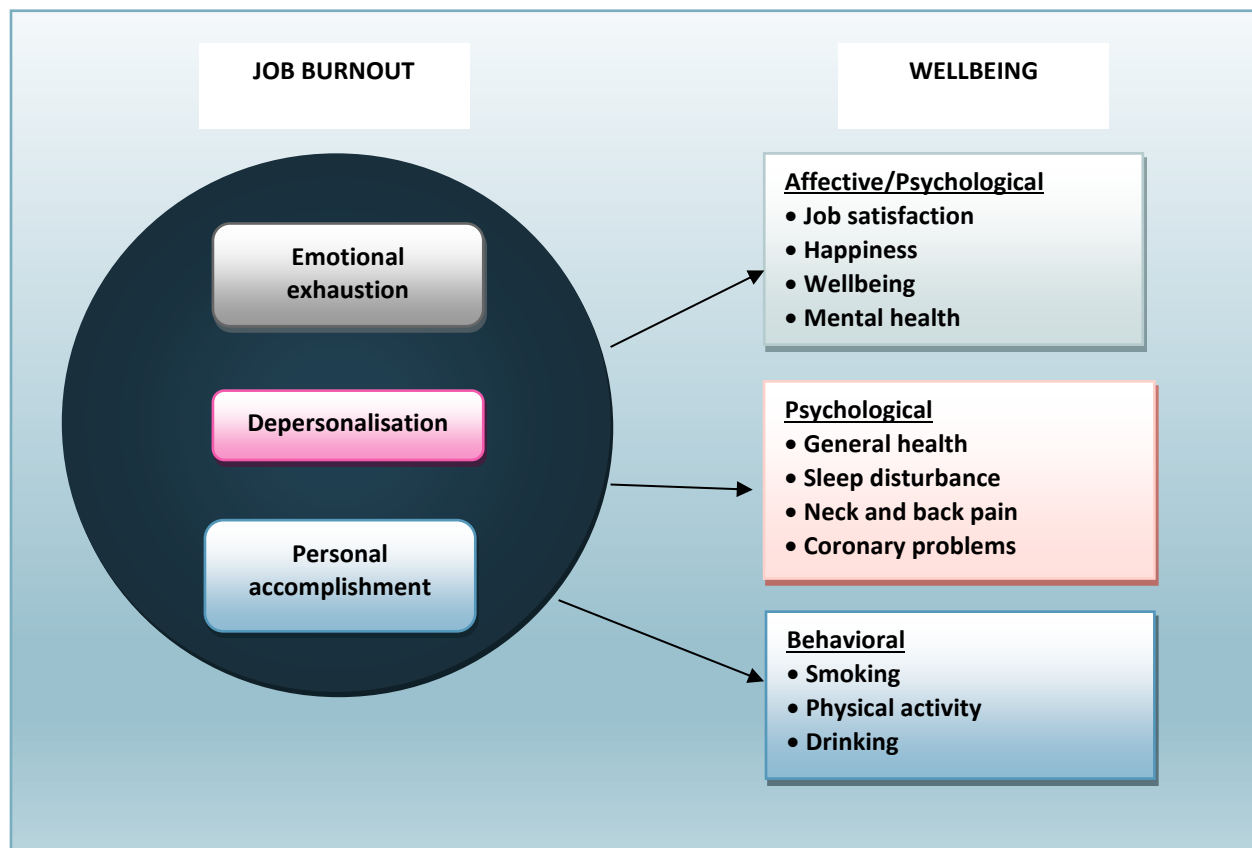


Figure 3.4: Conceptual model: The impact of job burnout dimensions on worker wellbeing.
Source: Lizano (2015).

Burke (2010), suggests that those who experience burnout, often experience negative work attitudes, job dissatisfaction and lower levels of job performance. Furthermore, recent research suggests that burnout is also associated with adverse psychological and physical health of employees and lower levels of job performance. Job burnout also negatively impacts upon one's general wellbeing (Leiter & Maslach, 2001). As such, the depletion of personal resources experienced by a "burned out" worker also leads to physical ailments by compromising the immune system, and may also manifest behaviourally to include things such as increased smoking or drinking as coping mechanisms (Leiter & Maslach, 2001). Abdallah (2009) asserts that job burnout may result in negative outcomes at both the individual and organisational level, which includes intention to leave the job, job dissatisfaction, absenteeism, decreased performance, less organisational commitment, depression, suspiciousness, isolation, anger, cynicism, anxiety, impatience, outbursts, exhaustion, insomnia, migraines denial, blaming, displacing of feelings, inefficacy, fatigue, lack of personal accomplishment, depersonalisation of clients, illness, poor eating habits, and substance abuse.

A plethora of studies investigate the relationship between burnout and wellbeing, ultimately revealing negative effects for both the individual and organisation (Bakir, Ozer, Ozcan, Cetin, & Fedai, 2010; Burke, Koyuncu, & Fiksenbaum, 2010; Burton, 2010; Glass, McKnight, & Valdimarsdottir, 1993; Jayaratne, Chess, & Kunkel, 1986; Maslach, 1997; Maslach et al., 2001). According to Warr (1996), low job-related wellbeing and burnout not only leads to unpleasant experiences for employees, but also threatens an employee's functioning within the work environment, thereby making the relationship between job burnout and wellbeing essential to investigate and understand. A study conducted by Kahn and Byosiere (1992) concluded that stressful conditions resulting in burnout are negatively related to employee wellbeing. Such stressful conditions include physical stressors (e.g. noise), role stressors (e.g. role ambiguity, role conflict), work overload or time pressure, and more specific stressors such as monotonous work and attention demands (Kahn & Byosiere, 1992). Lee and Ashforth (1996) conclude that two out of the three burnout factors, i.e. emotional exhaustion and depersonalisation, are found to be substantially correlated with job stressors such as lack of role clarity, role conflict, role stress, stressful events, workload, and work pressure. Separate studies by Lee and Ashforth (1996) and Warr (1996) conclude that impaired job-related wellbeing and burnout show small to moderate correlations with absenteeism and turnover intentions - two phenomena associated with high organisational costs.

According to Lee and Ashforth (1996), job-related wellbeing and burnout have multiple causes, which are partly innate and partly due to the work situation. In conclusion, it is particularly the combination and interplay of various factors which are responsible for a person's job-related wellbeing (Lee & Ashforth, 1996).

3.3.2 Work Engagement and Occupational Wellbeing

Burton, Buchan, and Tarleton (2015), state that engagement is without a doubt the flavour of the decade for organisational development and human resource professionals. According to Kahn (1990), work engagement harnesses organisation members' selves to their work roles. Engaged employees express themselves on a physical, cognitive and emotional level in the role they are performing (Kahn, 1990), resulting in positive outcomes for the organisation.

Shuck and Wollard (2010) state that The positive results that are credited to employee engagement are precisely what most companies are looking for: employees that are more productive, secure, beneficial, less likely to leave the company, less likely to be truant and those that are more open to take on optional efforts. According to Schaufelli et al. (2002), engaged employees' wellbeing reflects positive emotions such as joy and enthusiasm (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). Health work environments are paramount as they enable employees to feel engaged in both the workplace and at home, whereas poor workforce engagement can be damaging to organisations due to the resultant decrease or impairment in employee wellbeing and productivity (Shuck & Reio, 2014).

The link between work engagement and occupational wellbeing is well documented in literature. According to Bakker et al. (2008) and Bakker and Demerouti (2008), engaged employees perform better than employees who do not display engagement because: 1) such employees experience more positive emotions such as happiness and joy towards their work; 2) such employees experience greater psychological and physical health and wellbeing; 3) such employees are more open to work opportunities and are more optimistic and confident; 4) such employees foster the personal and job resources required to sustain their own engagement; and 5) such employees transfer engagement to others. Bakker et al. (2008) further states that at the individual level, engaged employees display high levels of energy, are enthusiastic about work, and are immersed in the performance of their work and roles. Furthermore, engaged employees experience work as fulfilling, personally rewarding and challenging, as opposed to stressful and unrewarding (Kahn, 1990; Saks, 2006). Andrew and Sofian (2012) submit that work

engagement is also linked to individual health outcomes. Accordingly, engaged workers are energised and less likely to develop work-related stress complaints, which has a severe negative impact on worker health. Schaufeli and Bakker (2004) report on the relationship between occupational stress and work engagement and conclude that research shows that even when exposed to high job demands and long work hours, some individuals do not show symptoms of disengagement. Instead, some find pleasure in dealing with such stressors (Schaufeli & Bakker, 2004).

The Gallup Group conducted extensive research on employee engagement levels at work, and health and wellbeing. Gallup (2013) states that engagement strengthens wellbeing in stressful environments, and since work is the main activity for most individuals during daylight hours, engagement levels have a direct impact on the manner in which they enjoy and carry out their work tasks. According to Gallup (2013), employee engagement levels at work and employee physical health correlated – employees engaged in their jobs are generally in better health and have healthier habits than those who are not engaged, or those who are actively disengaged. Gallup (2013) concludes that if organisations make a concerted effort to improve employee engagement levels, it will enable employees to improve quality of life, minimise the costs of decreased productivity which results from chronic illnesses, and also lower healthcare and absenteeism costs. According to Gallup (2013), the benefits of having engaged employees in an organisation is undeniable. Employees who are engaged and thriving would most likely be agile and resilient and will therefore be very unlikely to be thrown off by any major organisational changes or disruptions in their personal lives (Gallup, 2013). Similarly, Gallup (2013) states that engaged and thriving employees report fewer health problems. Compared to engaged but struggling counterparts, such employees have fewer unhealthy days as a result of physical or mental illness and are less likely to be diagnosed with a new disease in the next year. Also, such employees are less likely to be newly diagnosed with factors adding up to a big savings for company bottom line in terms of staff costs, productivity and performance (Gallup, 2013).

Gallup's (2013) research is confirmed in other similar studies. For example, Shuck and Reio (2013) deduced that engagement moderates the relationship between psychological workplace climate and overall wellbeing. Soane et al. (2013) found that meaningful work could result in reduced absence levels due to the fact that people are engaged in their work roles and stemming from the fact that wellbeing is strengthened by the association between meaningfulness and engagement. Robertson and Cooper (2010) found that the link to productivity strengthens when engagement is combined with a degree of employee

wellbeing. In conclusion, if organisations disregard employee wellbeing then they limit the benefits of employee engagement to their organisation (Robertson & Cooper, 2010).

3.3.3 Workaholism and Occupational Wellbeing

In recent years, increasing attention has been paid to the phenomenon of work addiction or workaholism (Balducci, Avanzi, & Fraccaroli, 2016). According to Shimazu, Demerouti, Bakker, Shimada, and Kawakami (2011), surplus work is a common phenomenon in many cultures, and this creates the potential for interference or conflict to occur between work and personal life. As a result, there is a need for a better understanding on how employee work impact on wellbeing (Shimazu et al., 2011).

Ng et al. (2007) state that in general, workaholism is assumed to undermine employee wellbeing. Several studies support this view and contend that workaholism is indeed associated with poor health (Burke, 1999, 2000; Burke et al., 2004; Kanai et al., 1996; McMillan et al., 2003; Spence & Robbins, 1992; Taris et al., 2005). According to Golden (2009), since workaholism is characterised by an employees' tendency to perform beyond employer expectations, the excessive work hours are generally at the expense of one's physical health in addition to family and social time. Similarly, Sonnentag (2003) concludes that working long hours is associated with elevated levels of stress and ill-health, presumably because workers who spend long hours at work, do not have sufficient opportunity to recover from excessive efforts. Further confirmation by Bakker et al. (2013), Ng et al. (2007) and Schaufeli et al., (2009) suggests that since workaholics spend an excessive amount of time on work, little opportunity remains to engage in leisure activities which function as a critical means of rest and recovery, leaving such persons cognitively and emotionally exhausted (Schaufeli et al., 2009).

Studies reveal that workaholism may be damaging to one's personal health (Britt-Lutter et al., 2013). An earlier study by Robinson (1998) identifies workaholism as a contributing factor causing coronary heart disease, job-related stress, burnout, and secondary addictions such as alcoholism. Burke (2000) reports that workaholism is associated with poor physical health, diminished sleep quality, and impaired psychological health. Taris et al. (2005) states that since workaholics persistently and frequently think about work, even when not physically at work, such persons may nonetheless suffer from sympathetic arousal and emotional distress. Further consequences of workaholism on wellbeing includes; job stress, burnout, negative affect, and lower levels of job and life satisfaction, all of which lead to lower levels of overall wellbeing (Taris et al., 2005). According to Andreassen, Ursin, and Eriksen (2007), workaholism is

linked to negative health consequences such as complaints of muscle pain, tiredness, mood disturbances, fatigue, headaches, sleep problems, and gastrointestinal complaints.

However, research reveals that the results are inconsistent. For example, Balducci et al. (2016) concludes that when not working, workaholics may also experience negative health outcomes, since the desire to be persistently and obsessively occupied with work activities is not being met. Ng et al. (2007) contends that when not working, workaholics are dominated by negative affective states, such as anxiety, irritability, and guilt. Similarly, McMillan and O'Driscoll (2004) and Snir and Zohar (2007) concluded no differences between workaholics and non-workaholics in terms of mental health and positive affect.

The conflicting results may, in part, be explained by different conceptualisations of workaholism. Essentially, while some authors include work enjoyment in the definition of workaholism, others do not. Therefore, one can conclude that the different components of workaholism can exert a varying influence on employee wellbeing (Burke, 2000).

3.3.4 Job Satisfaction and Occupational Wellbeing

One of the most noteworthy and important outcomes of job satisfaction is employee wellbeing (George & Jones, 2008). According to Warr (2002), since job satisfaction links employee attitudes to occupation, and has considerable criterion-related validity, the measure has a history of being used to operationalise employee wellbeing. Therefore, the way people feel at work is a crucial factor that all organisations should be measuring (Faragher, Cass, & Cooper, 2005).

When the concept of wellbeing is considered alongside occupational life, it may be defined as an individual establishing positive relationships with others, occupational acceptance, personal development, meeting life and occupational needs, and so realising themselves providing the life development personally (Isgor & Haspolat, 2016). According to Isgor and Haspolat (2016), one's professional life is a process, which creates a big part of individuals. Therefore, feelings, thoughts and behaviours of individuals during this process may remarkably guide levels of wellbeing, and in this sense, what the concept of job satisfaction expresses as remarkable. Since the occupation individuals' hold directly bears on affect of both job satisfaction and psychological wellbeing, an occupational life that is coherent with interests, abilities, and values will most likely positively affect the level of satisfaction from the occupation, and this positively reflects upon the psychological wellbeing of individuals (Maslach & Leiter, 1997). As a result, employees

that have a positive approach towards occupation are generally happier and more satisfied, whereas employees with negative attitudes towards occupation generally encounter several emotional, mental and physical problems, all of which ultimately impacts on wellbeing (Maslach & Leiter, 1997). Adopting a similar viewpoint, George and Jones (2008, p. 97) state that how happy, healthy, and successful an employee is can be accredited to job satisfaction, and “being dissatisfied with one’s job for a major portion of one’s working life almost certainly adversely affects wellbeing and general happiness”.

When studying employee wellbeing, individual features of job satisfaction are especially important and are distinguishable as either intrinsic or extrinsic (Rothmann, 2008). Intrinsic job satisfaction signifies how employees feel about the nature of the job tasks, whereas extrinsic satisfaction refers to how employees feel about aspects of the work situation that are external to the job tasks (Hirschfeld, 2000; Rothmann, 2008). According to Taris et al. (2005), when compared to extrinsic features, extrinsic features are found to be more significantly associated with overall satisfaction and wellbeing. Due to its strong link to employee wellbeing, job satisfaction is deeply incorporated into models of occupational wellbeing. For example, Danna and Griffith (1999) assert that job satisfaction is one of the central themes of occupational wellbeing and believe that overall wellbeing is comprised of both occupational and non-work-related wellbeing. Occupational wellbeing is defined as individuals’ work or job-related satisfactions (Danna & Griffith, 1999). Furthermore, this is defined as how satisfied or dissatisfied an individual is with attributes of the job, including pay, opportunities of advancement, work tasks, and their team.

Job satisfaction, and its serious and positive relationship with employee wellbeing, is extensively documented in the literature (e.g., Faragher et al., 2005; Judge et al., 2001; Spector & Fox, 2010; Warr, 2002; Warr, 2009). However, using job satisfaction to assess wellbeing is problematic (Sousa & Coleta, 2015). For example, some researchers, according to Sousa and Coleta (2015), view job satisfaction as a very precise construct, one that does not correctly characterise wellbeing. According to Wright and Cropanzano (2000), job satisfaction is typically a very narrowly defined construct and focuses only on satisfaction within the work context. However, wellbeing is, in fact, a much broader construct and therefore job satisfaction is unable to accurately measure occupational health.

3.4 TYPE COMBINATIONS OF OCCUPATIONAL WELLBEING BASED ON CIRCUMPLEX MODEL OF WELLBEING

The circumplex model is applied to research studies to identify occupational wellbeing types. However, no research is conducted using the circumplex model with the specific psychosocial, as well as the specific antecedents and positive and negative outcomes that are investigated in this study, within the South African context.

Van Beek, Taris, and Schaufeli (2011) rely on four wellbeing types based on mean-split criteria among Dutch employees: workaholics, engaged workers, engaged workaholics, and non-workaholic/non-engaged workers. In a study conducted by Salanova et al. (2014), to establish a typology of employee wellbeing, the authors identified four different types, namely, relaxed, work engaged or enthusiastic, workaholic or tense, and burned-out or fatigued. Each of the four types reflect different relationships with both job and personal characteristics (Salanova et al., 2014).

Mäkikangas et al. (2015) conducted research with the primary aim of investigating occupational wellbeing types based on the circumplex model. According to Mäkikangas et al. (2015), the person-oriented analysis reveals four occupational wellbeing types: Engaged, Burned-out, Ordinary and Bored-out. Two of these, namely Engaged and Burned-out, are characterised by expected combinations of the activation and pleasure dimensions of the circumplex model. Next, the authors found that engaged employees are characterised by high levels of work engagement and job satisfaction together with low levels of job exhaustion. The occupational wellbeing pattern among burned-out employees was the reverse. According to Mäkikangas et al. (2015), the latter two types support assumptions of the circumplex model. Alongside the engaged and burned-out types, the authors found two other unexpected wellbeing types, namely, ordinary and bored-out. The ordinary type was also identified in a study conducted by Salanova et al. (2014). According to the results of the study conducted by Mäkikangas et al. (2015), the workaholic type did not emerge, however, it should be noted that this type did emerge in studies conducted by van Beek et al. (2011), as well as Salanova et al. (2014).

Dijkhuizen, van Veldhoven, and Schalk (2016) performed research to investigate four types of affective wellbeing in a sample of Dutch entrepreneurs. The types include; work engagement, job satisfaction, exhaustion, and workaholism. The authors conclude that all correlations reveal that the four constructs

are strongly related (Dijkhuizen et al., 2016). According to Dijkhuizen et al. (2016), all relations in the two-dimensional model are significant, and strong correlations found between workaholism and exhaustion. Furthermore, the authors found relatively high correlations between workaholism and satisfaction, and high correlations between engagement and satisfaction (Dijkhuizen et al., 2016).

Hakanen, Peters, and Schaufeli (2017) used and integrated the circumplex model of affect (Russel, 1980), as well as the conservation of resources theory to hypothesise how various types of employee wellbeing, which can be differentiated on theoretical grounds (i.e., work engagement, job satisfaction, burnout, and workaholism), may predict various job crafting behaviours (i.e., increasing structural and social resources and challenging demands, and decreasing hindering demands) with time. The results reveal that a) work engagement positively predicted both types of increasing resources and challenging demands, and negatively predicted decreasing hindering demands; (b) workaholism positively predicted increasing structural resources and challenging demands; (c) burnout positively predicted decreasing hindering demands and negatively predicted increasing structural resources, whereas (d) job satisfaction did not relate to job crafting over time; and (e) work engagement positively influenced job satisfaction and negatively influenced burnout, whereas (f) workaholism predicted burnout after controlling for baseline levels (Hakanen et al., 2017). The authors conclude that work engagement is the strongest predictor of employee wellbeing (Hakanen et al., 2017).

In addition to the abovementioned, Mäkikangas et al. (2015) reports that a few other person-orientated studies concentrate on different quadrants of the circumplex model (Bakker & Oerlemans, 2011), however, not on all four simultaneously. In a longitudinal study by Mäkikangas, Schaufeli, Tolvanen, and Feldt (2013), the authors identify four workaholism and work engagement types based on Growth mixture modelling. The latter types include: 1) decreasing work engagement (WE) - low stable workaholism (WH); 2) Low increasing WE - average decreasing WH; 3) Low decreasing WE - low stable WH; and 4) High stable WE – average stable WH (Makikangas et al., 2013). These types differ from one other mainly in the levels and changes of work engagement. Thus, Makikangas et al. (2013) conclude that work engagement and workaholism are independent wellbeing states within individuals, and overall, these results provide some, if not wholly unambiguous evidence for the propositions of the circumplex model by Bakker and Oerlemans (2011). A subsequent study by Mäkikangas et al. (2014) deduced three types based on the scores for vigour and exhaustion over the workweek among Finnish social, healthcare and service sector workers: Constantly vigorous, concurrently vigorous and exhausted, and constantly exhausted (Mäkikangas et al., 2014).

While the aforementioned studies contribute to the knowledge on occupational wellbeing types, little is known about the affective wellbeing attributes and how the latter combine within individuals (Mäkikangas et al., 2015) to form combination types or models such as the circumplex model of emotions. In addition, the relationship dynamics between the attributes and its manifestation in the specific context of the healthcare industry, is yet to be explored, allowing this research to contribute new knowledge to the field.

3.5 CHAPTER SUMMARY

Occupational wellbeing is a traditional core issue for occupational health research (Salanova et al., 2013), and the healthcare industry could benefit immensely from knowledge of such research. There seems to be a paucity of research conducted using the circumplex model of wellbeing, especially within the South African context, and within the healthcare industry. Earlier research on the healthcare industry focuses on identifying sources of ill health among healthcare workers and health interventions in order to provide more high-quality care to patients (d’Ettoire & Greco, 2015; Sirsway et al., 2016; Rothmann, 2008; Van der Colff & Rothmann, 2009; Von Holdt & Murphy, 2005). This research focuses on determining occupational employee wellbeing types based on a composite set of employee wellbeing attributes (comprising of work engagement, job satisfaction, burnout and workaholism), and determining to what extent these types differ with regards to psychosocial antecedent variables (like age, job demands, job resources and work-related sense of coherence), as well as positive and negative outcome variables (comprising of organisational commitment and turnover intention). This knowledge may then be used to construct an occupational wellness model which may potentially inform affective wellbeing practices in the healthcare industry in South Africa.

Chapter 3 addresses the first research aim, namely, the conceptualisation of wellbeing attributes (work engagement, burnout, job satisfaction and workaholism). The chapter starts by providing a theoretical foundation of wellbeing, as well as the circumplex model of wellbeing underpinning this study. Next, the conceptual foundations of work engagement, job satisfaction, burnout and workaholism were discussed. Subsequent to this is a discussion as to how each wellbeing attribute relates to occupational wellbeing. Lastly, the type combinations of such wellbeing indicators already determined in the literature is based on the circumplex model of affective employee wellbeing is discussed.

Chapter 4 addresses the second theoretical research aim, namely, to conceptualise the psychosocial antecedent variables of age, job demands, job resources and work-related sense of coherence, and how these are conceptualised and explained through theoretical models in the literature. Moreover, the relationship between each of the antecedent variables with occupational wellbeing, as well as the specific wellbeing attribute indicators that are investigated in this study, are explored and discussed.

CHAPTER 4

ANTECEDENTS TO OCCUPATIONAL WELLBEING

In this chapter, the second research aim will be addressed, namely, to conceptualise the psychosocial antecedent variables; job demands and resources, work-related sense of coherence, as well as age, and how these are conceptualised and explained by theoretical models in the literature. In addition, the relationship between each of the antecedent variables with occupational wellbeing, as well as the specific wellbeing attribute indicators that are investigated in this study, will be explored and discussed.

4.1 ANTECEDENTS

4.1.1 Conceptualisation of Antecedents

An antecedent variable is defined as a specific condition or factor that influences or predicts a particular behaviour to emerge in practice (Saks, 2006). Antecedent variables are independent variables, which precede other independent variables in time. In statistics and social sciences, an antecedent variable is a variable that can help to explain the apparent relationship (or part of the relationship) between variables that are nominally in a cause and affect relationship (Salkind, 2012).

4.1.2 Antecedents investigated in current study

This research focuses on determining occupational wellbeing types based on a composite set of employee wellbeing attributes (comprising of work engagement, job satisfaction, burnout and workaholism), which were discussed in Chapter 3, and determining how these types differ with regard to the psychosocial antecedent variables (job demands, job resources, work-related sense of coherence and age), which are to be discussed in this chapter. It is envisioned that the psychosocial antecedent variables will reveal a better understanding of the occupational wellbeing types that will be identified. The inclusion of the antecedent variable of age and work-related sense of coherence allows this research to be original in understanding and identifying the occupational wellbeing types. Literature has revealed that age becomes a pertinent factor when exploring affective wellbeing types (Mäkikangas et al., 2016; Wilks & Neto, 2013) and work-related sense of coherence provides incremental validity over and above sense of coherence in predicting work engagement.

The psychosocial antecedent variables included in this study will be conceptualised in the following section.

4.2 PSYCHOSOCIAL ANTECEDENT VARIABLES

4.2.1 Conceptualisation of Age

The concept of age is complex and may be evaluated in various ways. According to Schalk et al. (2010, p. 78), the aging process can be defined as “a multidimensional process that encompasses changes in functioning over time”; and these changes can involve psychological, physiological or social processes. Age can be defined either objectively or subjectively, and the experience of aging has numerous definitions. The objective definition of age refers to a person’s chronological age (Kooij, De Lange, Jansen, & Dijkers, 2008). Chronological age, which refers to the number of years a person has lived, is generally used as an indicator for different aspects of the aging experience (Sarkisian et al., 2011). It is well recognized, however, that people of the same age can have very different experiences with aging (Sarkisian et al., 2011). Kooij et al. (2008) state that this definition limits ones’ understanding of numerous subjective variables, which may be related to age, bearing in mind that the aging progress also refers to physical, biological and social changes that vary among individuals. The subjective definition of age on the other hand, refers to the self-perception of age, i.e. “how old or young an individual perceives themselves to be” (DuBose, 2016, p. 11). DuBose (2016) states that both the subjective and objective views of age are related with the psychological and physical variables associated with stress experienced at work. Sarkisian et al. (2011) believed that career stage or occupational age is another form of age that is important to consider in the work context. According to Sarkisian et al. (2011), the concept of career stage reflects the observation that people tend to acquire sets of abilities (skills and knowledge) with the expansion of their occupational roles and responsibilities. Sarkisian et al. (2011), identifies three specific career stages; early career, which is typically characterized by exploration and establishment, mid-career, which is typically characterized by career goal reappraisal, and lastly late career, which is typically experienced in late adulthood.

Studying the effects of age in the workplace is not a new phenomenon (Van der Westhuizen, Horn, & Viljoen, 2015). However, age is often a factor that may have an affect on the well-being levels of employees and is unfortunately at times overlooked by organisations (Hayley, 2012). Employees of all ages are included in the workforce of organisations, and are in different phases of their careers, ranging from entry-level employees (young adulthood) to employees that have reached retirement age (James et al., 2011). Kooij et al. (2008), believes that age has become an important characteristic for organisations due to the low number of older employees in the workforce. Boehm and Kunze (2015) on the other hand

state that due to numerous trends worldwide, such as low birth rates, increased longevity and the war for talent, organisations are in fact forced to hire older workers, which may be beneficial, since as a result of the multifaceted process of development, older individuals may be more competent than their younger counterparts in performing various work-related activities (Scheibe & Zacher, 2013). Bezuidenhout and Cilliers (2011) concluded that within the South African context, that the general workforce is fairly young.

Research into younger and older employees in organisations has revealed contradictory results. After extensive research, Zaniboni, Truxillo, and Fraccaroli (2013) concluded that some researchers have found that younger workers are more future orientated and look for knowledge acquisition because this can further their careers. On the other hand, older workers (who has already acquired knowledge and experience in their years of working) are more present orientated and are more selective with their resources used (James et al., 2011; Zaniboni et al., 2013). Older workers also have some preconceived notions that they are not supposed to be working or are just simply waiting until they retire, and as such might be less engaged (James et al., 2011). Older workers are also more concerned with maximizing positive emotions and social experiences (Zaniboni et al., 2013).

Scheibe and Zacher (2013) state that age is also linked to work events faced. For example, young employees may face high levels of job insecurity, middle-aged employees may tend to more regularly experience work-life conflict and older employees may perceive age discrimination (Scheibe & Zacher, 2013). It is also important to note that ageing may also have beneficial effects, through increased maturity and the emotion regulation process, on how employees respond to negative events in the workplace.

4.2.2 Conceptualisation of Job Demands-Resources

The Job Demands-Resources (JD-R) model was first published by Demerouti, Bakker, Nachreiner, & Schaufeli (2001) to understand the antecedents of burnout. This original JD-R model is shown in Figure 4.1. The JD-R model is a parsimonious, heuristic model that synthesises a number of important health and performance related constructs (Bakker & Demerouti, 2007).

According to Bakker and Demerouti (2007), the JD-R model focuses on negative and positive indicators of employee wellbeing. Every occupation comprises of its own, unique set of job characteristics, which may be classified as into one of two categories, namely, job demands and job resources (Bakker & Demerouti, 2016). Demerouti et al. (2001, p. 501) defined job demands as “those physical, social, or organisational

aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs”. According to Demerouti et al. (2001), examples of job demands include; work overload, heavy lifting, interpersonal conflict, and job insecurity (Demerouti et al., 2001). Job resources were defined as “those physical, social, or organisational aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands and the associated physiological and psychological costs; (c) stimulate personal growth and development” (Demerouti et al., 2001, p. 501). According to Demerouti et al. (2001), examples of job resources include; feedback, job control, and social support. Bakker, Demerouti, and Verbeke (2004), state that resources may be situated at various levels, which include; the level of the organisation (e.g., salary, career opportunities, job security), interpersonal and social relations (e.g., supervisor and co-worker support, team climate), the organisation of work (e.g., role clarity, participation in decision making), and finally, the level of the task (e.g., performance feedback, skill variety, task significance, task identity, autonomy).

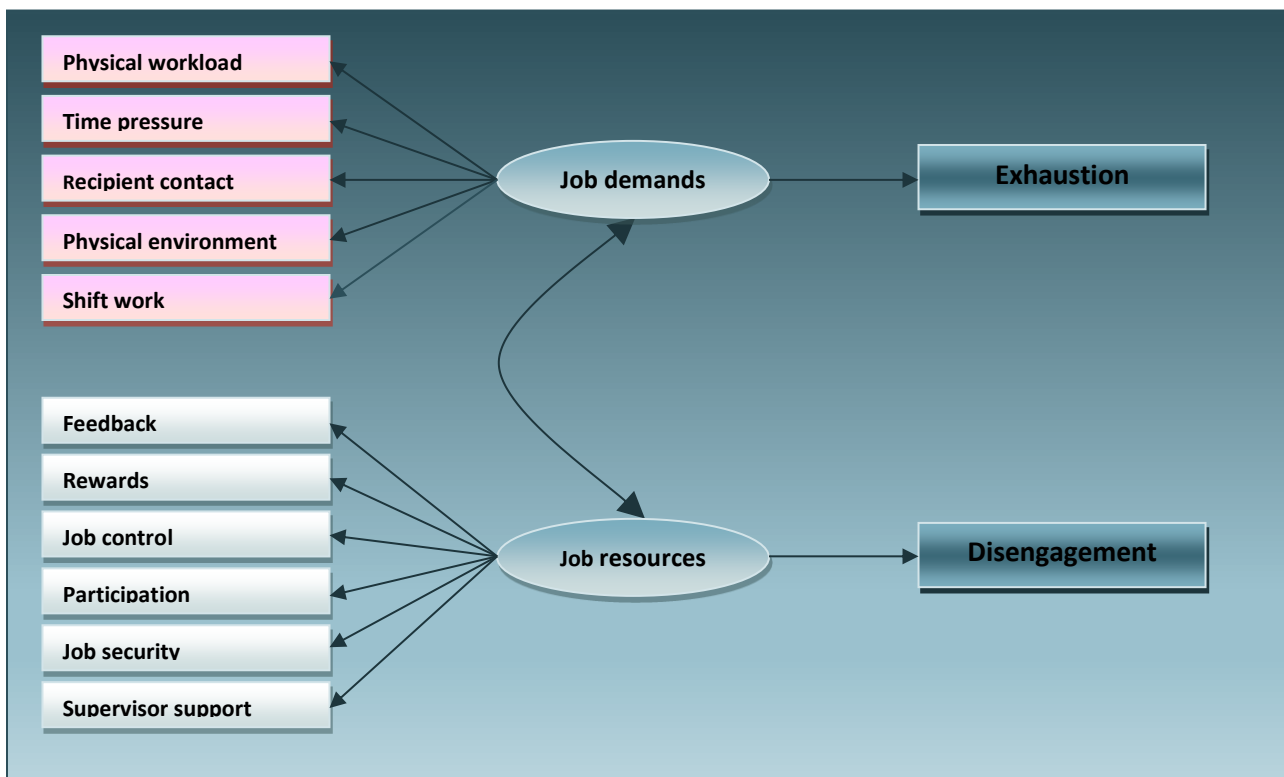


Figure 4.1: The original Job Demands-Resources (JD-R) Model of Burnout. Source: Demerouti et al. (2001).

The JD-R model drew on original research conducted by Lee and Ashforth (1996), which acknowledged eight job demands and thirteen job resources that were considered to be possible causes of burnout in organisations. The model aligns with the job characteristics theory postulated by Hackman and Oldham

(1980), which highlights the motivational aspect of job performance. According to Hackman and Oldman (1980), in order to achieve organisational goals, organisations need to create an environment in which the resources needed to deal with the demands of the work are accessible to employees. The model suggests that whilst every occupation and its work environment possess its own challenges, there exists a predominant theme, which relates to the balance between the demands and resources, which are available in that environment (Hu, Schaufeli, & Taris, 2016). Schaufeli and Taris (2014) state that the balance between positive (i.e. resources) and negative (i.e., demands), job characteristics, are assumed to impact on employee health and wellbeing.

The original JD-R model developed by Demerouti et al. (2001) was adapted three years later, by Schaufeli and Bakker (2004). The adaption of the model by Schaufeli and Bakker (2004), included work engagement in addition to burnout, and considered burnout and work engagement to be mediators of the relation between job demands and health problems, and job resources and turnover intention, respectively. By doing so, Schaufeli and Bakker (2004) introduced a positive-psychological twist to the JD-R model. This being that the revised JD-R model not only sought to explain a negative psychological state, (i.e., burnout) but also its positive counterpart, that being work engagement (Schaufeli & Bakker, 2004). Similar to the early JD-R model, the revised model assumes that burnout results from high job demands and poor job resources; with the exception that now burnout is treated as a unitary rather than a two-dimensional construct (Schaufeli, 2014). Further to this, the adapted JD-R model placed emphasis on the individual as being central to the model, whereas the original model by Demerouti et al. (2001) focused primarily on the organisational level. The adapted model by Schaufeli and Bakker (2004) seems to align with the original work by Kahn (1990), who believed that the experience of engagement was largely reliant on an individual's decision within an organisational context to commit to the experience of becoming engaged.

The JD-R model further postulates that job demands and resources trigger two different psychological processes: a health-impairment process and a motivational process (Bakker & Demerouti, 2007; Bakker & Demerouti, 2016). With regard to the health-impairment process, job demands are presumed to exhaust employees' mental and physical resources and as a result, leads to energy depletion and health problems (Schaufeli & Taris, 2014). With regard to the motivational process, job resources are believed to have motivational potential and therefore foster positive organisational outcomes (Schaufeli & Taris, 2014).

According to Schaufeli (2014), the scope of the JD-R model is much broader when compared to other models since it potentially includes all job demands and resources. Schaufeli (2014) further states that it is important to note that there is no single JD-R model. Rather than relating well-defined and specific sets of concepts to each other, the JD-R model is heuristic in nature and represents a way of thinking about how job characteristics could potentially influence health, wellbeing and motivation. Schaufeli and Taris (2014) note that an unresolved issue with the JD-R model is that the difference between job demands and resources may not be as distinct as they are by definition. According to the authors, demands and resources typically comprise of two different elements since they are valued either negatively or positively. Therefore, challenging demands that are positively related to work engagement, as found by Crawford et al. (2010), might be re-conceptualized as “resources” since they are valued positively (Schaufeli & Taris, 2014). Schaufeli and Taris (2014) reason that as a guiding principle, demands are appraised negatively and resources are appraised positively, but future research should place emphasis on challenging demands (i.e., positively valued demands) and threatening resources (i.e., negatively valued resources).

Bakker and Demerouti (2014) state that in addition to job resources, employees have personal resources, which they can use to deal with their job demands (see Figure 2). Personal resources are positive self-beliefs, which are linked to resiliency and refer to individuals’ sense of their ability to control and impact their environment successfully (Hobfoll et al., 2003). Schaufeli and Taris (2016) conducted a review of the model to explore how the adapted JD-R model by Schaufeli and Bakker (2004) model, incorporates personal resources. According to the authors, the model incorporates personal resources in the following ways:

- Personal resources are seen to directly impact wellbeing (in this context, personal resources are defined in terms of factors such as resilience and control);
- The relationship between job characteristics and wellbeing is moderated by personal resources. The assumption here is that the impact of job demands may be cushioned by personal resources and affect engagement levels;
- Personal resources mediate the relationship between job characteristics and wellbeing. Environments rich with resources provide employees with the opportunity to develop factors such as self-confidence, optimism and hope, as a result of the availability of required resources to achieve these goals;

- Personal resources influence individual perceptions of job characteristics. This is in line with the thinking from Bandura (2001) who states that personal resources with reference to factors such as self-efficacy will shape the way in which individuals understand their work environment and subsequently influence factors such as work engagement and performance (Schaufeli & Taris, 2016).

Figure 4.2 below illustrates the link between job resources and personal resources in the revised JD-R model, and role that they both play in aiding employees to deal with job demands.

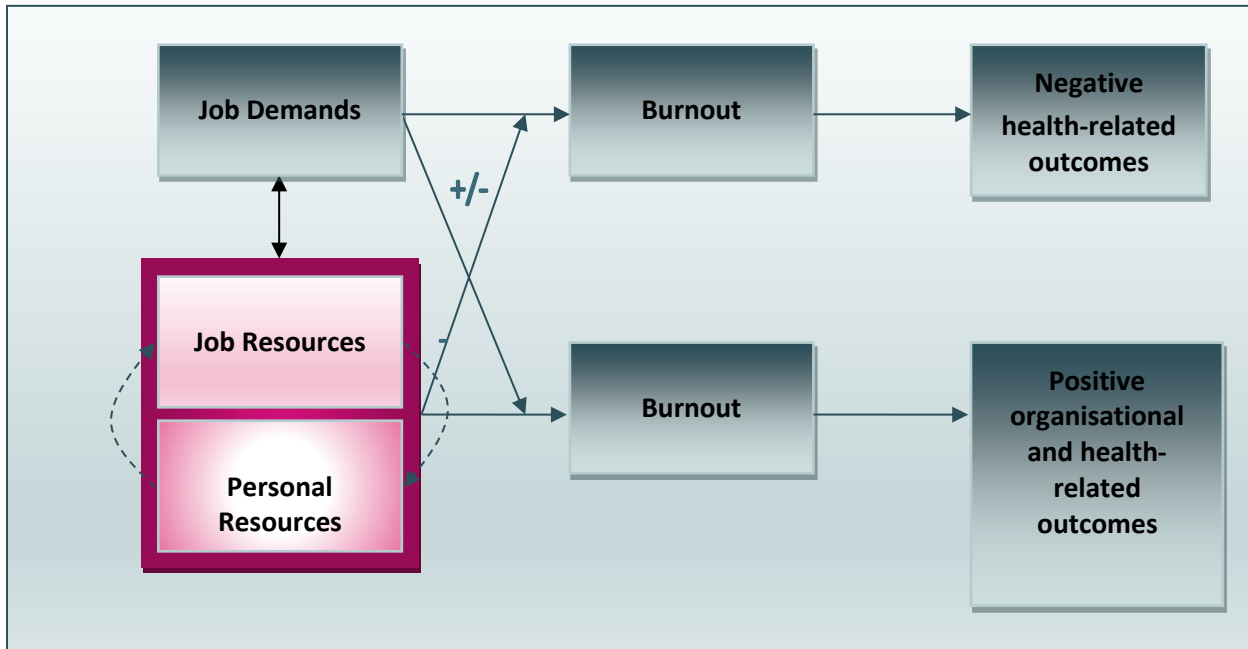


Figure 4.2: The Revised Job Demands-Resources (JD-R) model to include Work Engagement. Source: Schaufeli and Bakker (2004).

The subsequent section will conceptualise the personal resource that is seen as a psychosocial antecedent variable in this study, that of Work-SOC.

4.2.3 Conceptualisation of Work-Related Sense of Coherence

Van der Westhuizen (2018) stated that more than three decades ago, Antonovsky (1987) concluded that it is idealistic to think that a working environment that is completely free of stressors can be made as employees will continuously need to cope. Antonovsky (1979) coined the concept 'sense of coherence' (SoC). According to Eriksson and Lindström (2006), one of the most important personal resources in relation to health and wellbeing, is SoC. Personal resources have been defined as lower order, cognitive-affective aspects of an individual's personality, that entail positive beliefs about oneself and the world and which motivate and facilitate goal attainment, (Van den Heuvel, Demerouti, Schaufeli, & Bakker, 2010).

In the context of the conservation or resources (COR) theory, personal resources have been described as aspects of the self that are generally linked to resilience and refer to an individual's sense of ability to impact and control their environment successfully (Hobfoll, Johnson, Ennis, & Jackson, 2003). It has been shown that positive self-evaluations relate strongly to various aspects of work-related wellbeing (Judge, Van Vianen, & De Pater, 2004). The reason for this is that the higher the personal resources, the more positive individuals' self-regard. According to Fredrickson (2001), personal resources, which include sense of coherence, are generally activated in various types of difficult situations to serve as a coping mechanism.

Antonovsky (1979) posed a question, which subsequently informed the theory of salutogenesis: How do people manage to stay healthy? From this, Antonovsky (1979) developed a theory to explain the origin (genesis) of health (salus). Antonovsky (1979) criticized the dichotomous classification of persons as either diseased or healthy, and instead, viewed health as a continuum from total ill health (dis-ease) to total health (ease). Based on a series of life history interviews, Antonovsky (1979) identified SoC as a central variable in explaining an individual's movement toward the healthy end of the continuum. He described SoC as a global orientation, in which an individual perceives life as comprehensible, manageable and meaningful (Antonovsky, 1987a). Since SoC is a global and non-context specific orientation that is not embedded in a particular culture, it can function differently in different contexts (Antonovsky, 1993).

According to Eriksson and Lindström (2006) (as cited in Vogt, Jenny, & Bauer, 2013) research has consistently shown that individuals with a strong SOC are healthier than those with a weak SoC, making this an interesting concept for those concerned with health and its promotion. According to Rothmann, Jackson, and Kruger (2003), whether a strong or a weak sense of coherence develops, depends on an individual's availability of generalised resistance resources. Rothmann et al. (2003) state that a strong sense of coherence will develop over time, provided that generalised resistance resources which allow repeated, consistent experiences are present, that there is a balance between overload and under load and that the outcome can be influenced. On the other hand, experiences that are characterised by unpredictability, uncontrollability and uncertainty will lead to a weak sense of coherence (Rothmann et al., 2003).

Bauer and Jenny (2007) identified that since general SOC is primarily formed during early life and is also influenced by life experiences outside work (Antonovsky, 1987), a more context-specific definition of SoC

would prove useful for the planning and evaluation of health-related interventions in the workplace. Bauer and Jenny (2007) subsequently proposed the concept of a work-related SoC (Work-SoC).

Work-SoC is defined as ‘the perceived comprehensibility, manageability and meaningfulness of an individual’s current work situation’ (Vogt et al., 2013, p. 2). The perception of comprehensibility, manageability and meaningfulness of the work situation is influenced by the individual characteristics (personality, behaviour and experiences), work characteristics that comprise of job demands (e.g. structures and processes) and job resources (e.g. colleague and supervisor support) (Vogt et al., 2013). The dimensions of Work-SoC are in line with the general SoC dimensions of comprehensibility, manageability and meaningfulness (Vogt et al., 2013).

Comprehensibility, as a Work-SoC dimension describes the extent to which a work situation is perceived as structured, consistent and clear (Vogt et al., 2013). According to Antonovsky (1991), the ability to create structure out of chaos makes it easier for us to understand one’s context and one’s own part in it, for example, one’s role in the workplace. Antonovsky (1991) further states that a prerequisite to be able to cope with a stressful situation is that one can to some extent understand it.

Manageability as a Work-SoC dimension describes the extent to which an employee perceives that adequate resources are available to cope with the demands in the workplace (Vogt et al., 2013). In the work environment, manageability may be influenced by ‘an appropriate overload–under load balance’ (Antonovsky, 1987, p. 161), and employees must be convinced that the problems facing them are legitimate and applicable to their work; that they have the necessary knowledge, skills, material and equipment to address the task at hand; that their potential is fulfilled; and that support is available from legitimate others in the working context (Antonovsky, 1987) (as cited in Van der Westhuizen, 2018). Antonovsky (1991) states that formal resources include, for example, social services and care staff in public and private organisations, whilst informal resources include, for example, family, circle of friends, colleagues, and significant others; in other words, people who are trusted and who can be relied on in difficult situations. Coping further requires that an individual is motivated to solve the problems that is the source of stress, is willing to devote energy to solve the problem, and further finds meaning in being able to manage the situation (Antonovsky, 1991). This subsequently leads to the third dimension of Work-SoC, namely meaningfulness.

Meaningfulness describes the extent to which a situation at work is seen as worthy of commitment and involvement (Vogt et al., 2013). Meaningfulness is described by words such as a rewarding and a significant work situation (Vogt et al., 2013). According to Antonovsky (1990), the dimension of meaningfulness helps people to be motivated and consider highly stressful situations as interesting and challenging. It is also considered to be the most important, because without a motivational component and meaning, the ability to predict and cope with the environment becomes temporary (Antonovsky, 1990).

According to Bauer and Jenny (2007), Work-SoC is considered as the representation of organisational structures and processes at the individual level and is further believed to serve as an indicator of the overall quality of an employee's working life. In 2011, Eberz, Becker, and Antony referred to the original conceptualization of Work-SoC by Bauer and Jenny (2007), and re-interpreted Work-SoC as an individual meta-resource that acts as a moderator of the work-health relationship by reducing the potential negative effects of work stressors.

The next section will provide an overview of how age is commonly conceptualised, with particular reference to the occupational context.

4.3 RELATIONSHIP BETWEEN PSYCHOSOCIAL ANTECEDENT VARIABLES AND OCCUPATIONAL WELLBEING

4.3.1 Age and Occupational Wellbeing

Today's societies are facing important demographic changes, one of them being that there is an increase in the proportion of older person's and people aged 65 years or older, which are still working (Lorente, Tordera, & Peiró, 2018). Due to this increased percentage of older employees that now comprise the workforce, researchers have started paying increased attention to the relationships between employees' age and important work outcomes, such as occupational strain and wellbeing (Kooij et al., 2013).

According to Kanfer and Ackerman (2004), the process of aging can lead individuals to reorganise or reorder their career or personal life goals, which can have serious implications for their occupational wellbeing. There are several studies, which have investigated how age-related changes influence employees' occupational strain and wellbeing (Farr & Ringseis, 2002; Hedge & Borman, 2012; Kanfer

& Ackerman, 2004; Kanfer, Beier, & Ackerman, 2013; Ng & Feldman, 2013), all concluding that an employees' age, as well as the related changes that it brings, can have a direct relationship on their wellbeing in the work environment. There is also considerable evidence in the literature on general wellbeing, that shows middle-aged adults (i.e. between the ages of 35 and 50 years) experience lower levels of well-being than both younger and older adults (Blanchflower & Oswald, 2008; Ng & Feldman, 2010).

As individuals move through the various stages of their careers, the elements of their work environments begin to change. Research on career stages by Ng and Feldman (2010) has shown that job demands tend to be higher in one's mid-career as compared to early and late career since employees at this career stage tend to assume more responsible supervisory positions without having full job autonomy. Another study by Ng and Feldman (2007) revealed that as employees approach retirement age, they face decreasing work demands, either as a result of receiving less challenging job assignments or because they voluntarily withdraw into part-time positions. The above two studies illustrate that one's career stage bring about challenges which can have a direct impact on one's perceived level of job stress and consequently occupational wellbeing. A study by Zacher et al. (2012, p. 54) revealed that the "sandwich generation" (i.e. a generation of people, usually in their thirties and forties, who are responsible for both bringing up their own children and caring for their aging parents), tend to experience greater occupational stress and lower levels of wellbeing, due to their work demands and personal life demands peaking at the same time. Scheibe and Zacher (2013) state that an employees' capacity and their motivation to display and regulate emotions changes across their lifespan, and this in turn, impacts on and influences their occupational strain and wellbeing. A study by Zacher et al. (2014) found that people in their late twenties through to early forties, tend to be less satisfied with their jobs as they are emotionally exhausted with their jobs when compared to their younger counterparts (i.e. younger than 25), or older counterparts (i.e. older than 45).

According to Van der Westhuizen et al. (2015), when addressing the wellbeing of employees, a greater understanding of age differences is needed. This is in line with Rechel et al. (2013), who stated that taking into account the role of age in studies about health and wellbeing at work is necessary to obtain realistic conclusions that allow for the development of policies and interventions.

4.3.2 Job Demands Resources and Occupational Wellbeing

The JD-R model is a theoretical model that focuses on negative and positive indicators of employee wellbeing (Bakker & Demerouti, 2007). According to JD-R theory, employee wellbeing is a function of the work environment, which has stable but also malleable elements. The model assumes that employee health and wellbeing stem from a balance between positive (job resources) and negative (inordinate job demands) (Bakker & Demerouti, 2007), as discussed above. According to Demerouti and Bakker (2011), job demands tend to have detrimental effects on employee health and wellbeing, whereas job resources are likely to have beneficial effects.

To help explain the effects of job demands and job resources, the JD-R model proposes two underlying psychological processes (Demerouti & Bakker, 2011), both of which were discussed in the preceding section. To confirm, the first process, the health impairment process, proposed that job demands deplete employee's physical and psychological resources and therefore result in a state of exhaustion (Bakker & Demerouti, 2007; Bakker & Demerouti, 2016) (see Figure 3). Due to the depletion of energy, the end result is usually health problems and impoverished wellbeing for employees (Hakanen, Schaufeli, & Ahola 2008; Schaufeli & Taris, 2014). Demerouti and Bakker (2011) state that job demands consist of factors (such as time pressure and workload), which result in reduced health and energy causing severe mental disorders over a period of time and eventually, low employee performance. According to Demerouti and Bakker (2011), employees start to invest a greater amount of time to complete higher job demands, which harshly impacts their work-life balance. Initially, employees tend to invest their maximum physical and mental energies towards effectively managing their occupational stress, often at the cost of their wellbeing (Demerouti & Bakker, 2011). As a result of the additional energies being invested, and the work-life imbalance, burnout results which seriously threatens employees' wellbeing (Bakker & Demerouti, 2011). Job demands are positively associated with burnout, which will be discussed in further detail in the subsequent section.

Building on what was said in the preceding section about the second process, the motivational process, this process proposes that job resources are intrinsically or extrinsically rewarding and therefore play a motivational role (Bakker & Demerouti, 2007; Bakker & Demerouti, 2016). As a result of their motivational potential, job resources usually have a direct beneficial impact on employee health and wellbeing (Hakanen et al., 2008; Schaufeli & Taris, 2014). Demerouti and Bakker (2011) state that since job resources comprise of factors which motivate employees (such as,

management support, supervisors' feedback, skills development, and autonomy) they are beneficial in moderating the effects of greater job demands. According to Schaufeli and Bakker (2004), since job resources provide meaning and satisfy people's basic needs, job resources are motivating and contribute positively to work engagement, which will be discussed in further detail in the subsequent section.

Figure 4.3 below demonstrates the dual psychological process of the extended JDR model that was discussed above.

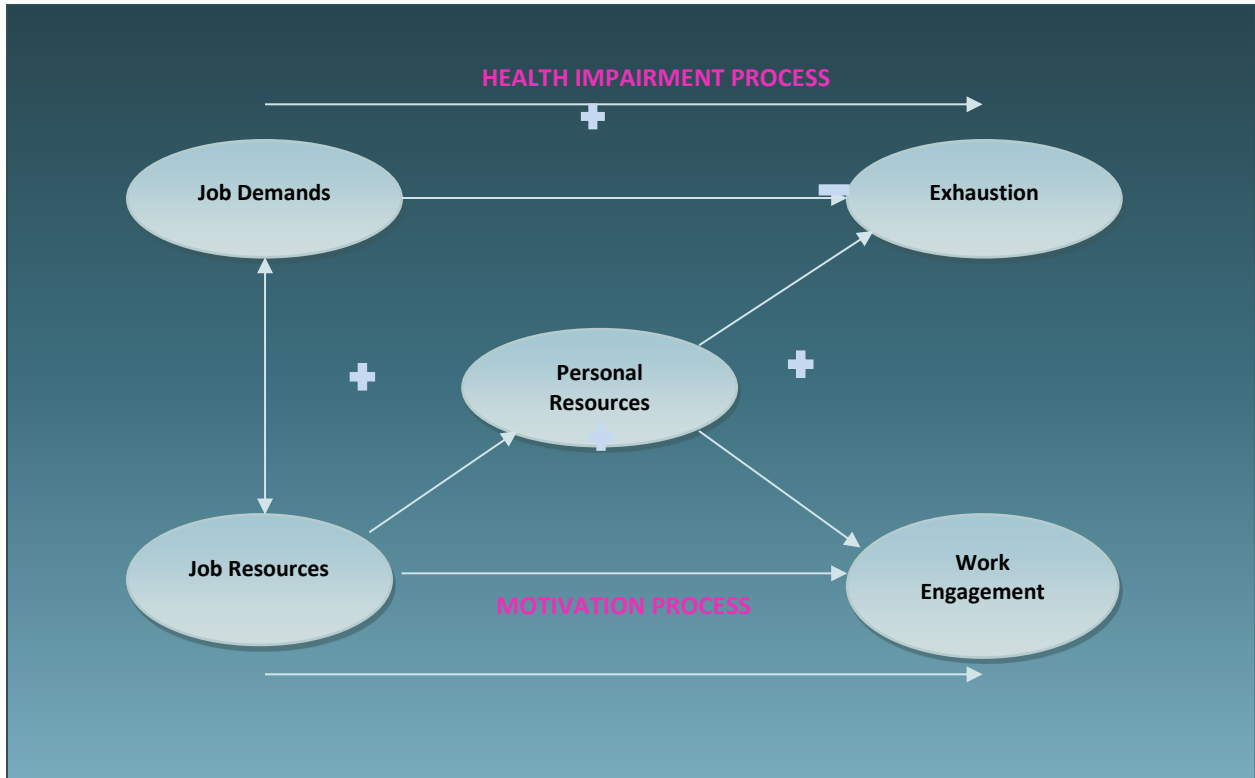


Figure 4.3. The extended JD-R model illustrating the dual psychological process.

Further to the main and initial effects of job demands, the JD-R model suggests that job resources aid in buffering the adverse impact of job demands on employee health and wellbeing (Demerouti & Bakker, 2011). What the model postulates is that, if employees have an abundant supply of job resources to assist with their job demands, the damaging effects of job demands on employee health and wellbeing will be mitigated (Demerouti & Bakker, 2011). On the other hand, if employees do not have an adequate supply of job resources, this will complicate their ability to meet job demands, which will result in job strain and impact negatively on overall employee wellbeing (Schaufeli & Bakker, 2004). Schaufeli and Taris (2014) concluded that job resources have been represented by a

variety of different concepts, including advancement, appreciation, financial rewards, goal clarity, information, job challenge, leadership, opportunities for professional development, participation in decision-making, procedural fairness, quality of relationship with supervisor, social support from colleagues, social support from supervisor, supervisory coaching, task variety and team cohesion.

Later in this chapter, the impact of job demands and resources on the specific occupational wellbeing indicators that are investigated in this study, namely, burnout, work engagement, workaholism and job satisfaction, will be discussed.

4.3.3 Work-Related Sense of Coherence and Occupational Wellbeing

Basińska, Andruszkiewicz, and Grabowska (2011) state that sense of coherence is seen as an important source of resilience and protection of an individual's health. According to the authors, those with a high level of SOC enjoy a better life and wellbeing, and due to a different perception and event assessment, they experience a lower feeling of burden as they are able to better cope with difficulties than those individuals with a weak sense of coherence (Basińska et al., 2011).

According to Antonovsky (1987), a person with a strong SOC is more likely to define stimuli as non-stressors and to assume that he or she will adapt automatically to the demand. On the other hand, if a person perceives the stimuli as stressors, and if they have a strong SOC, they are more likely to define the stimuli as comprehensible, manageable and meaningful, in other words, benign or irrelevant, and feel confident that the tension will quickly dissipate (Antonovsky, 1987). A person's evaluation of a stimulus as a non-stressor on the one hand, and the capacity to define a stressor as irrelevant on the other, are due to the generalized resistance resources that stimulate confidence in strong SOC persons that a problem will likely turn out to be less serious and is reasonably resolvable (Antonovsky, 1987). As a result, a person's tension evaporates, and rather than damaging one's health, it results in a neutral or even a health-promoting outcome (Antonovsky, 1987). Antonovsky (1987) further states that a strong SOC is also associated with health behaviours, and eventually with a positive health status.

The overarching affect model of SOC has been widely applied to wellbeing studies and has shown strongly consistent results; the stronger the SOC, the greater the wellbeing. Studies have found, for example, that a strong SOC is associated with competence (Kalimo & Vuori, 1991), life satisfaction (Kalimo & Vuori, 1990; Sagy, Antonovsky, & Adler, 1990), general wellbeing (Ryland & Greenfeld, 1991), functional status (Carmel et al. 1991, Langius & Bjorvel, 1993), and psychological and physical health (Carmel et al., 1991; Sagy et

al., 1990). It is also found that a strong SOC predicts healthier behaviours (Midanik, Soghikian, Ransom, & Polen, 1992) (as cited in Basińska et al., 2011).

Studies have also empirically explored the affect of sense of coherence and wellbeing within the context of the work environment. A study conducted by Feldt (1997) found that sense of coherence was directly related to reduced psychosomatic symptoms and emotional exhaustion in a sample of nearly 1000 technical designers. Feldt (1997) further reported a moderating effect, i.e., that people with a high sense of coherence were better protected from the negative effects of unfavourable working conditions. A longitudinal study that was conducted by Feldt et al. (2000) found that a good organisational climate and job security strongly correlated with a high sense of coherence, which in turn was associated strongly with wellbeing. Urakawa and Itoh (2014) reported that SOC strongly modifies job stress responses since having a strong SOC protects individuals from the effects of stressors at work.

From the above, it is hypothesised that Work-SoC will also have a positive affect on an individual's wellbeing in the work context. The relationship between Work-SoC and the specific occupational wellbeing indicators that are investigated in this study (burnout, work engagement, workaholism and job satisfaction), will be discussed later in the chapter.

A discussion into the relationship between the psychosocial antecedent variables and each of the employee wellbeing attributes will follow in the subsequent section.

4.4 RELATIONSHIP BETWEEN PSYCHOSOCIAL ANTECEDENT VARIABLES AND EMPLOYEE WELLBEING ATTRIBUTES

4.4.1 Age

4.4.1.1 Age and Burnout

Gómez-Urquiza et al. (2017) states that with the exception of descriptions in samples, the relationship between age and burnout is usually passed over without any specific mention. When the relationship has been examined, inconclusive results have been found. Some studies have found no correlation between age or years of experience and burnout, others have found such correlations (Brewer & Shapard, 2004; Gómez-Urquiza et al., 2017). This makes it incredibly difficult for researchers to know whether age is a risk factor for burnout (Brewer & Shapard, 2004; Gómez-Urquiza et al., 2017).

For example, Ahola et al. (2008) concluded from reviews, which have concerned mostly human service work, burnout has been reported to decrease with age, whereas population studies on burnout have found the opposite. Similarly, Laub (1998) concluded from a study of isolation as a predictor of burnout among secondary school teachers that younger teachers were at a greater risk of experiencing burnout when compared with their older counterparts. Konert (1997) on the other hand concluded from a study on burnout, perceived job stress, job satisfaction, and coping among school teachers; that the levels of experienced teacher burnout amongst the teachers were no different for the younger and older teachers. Similar contradictory results were found in studies by Koivula, Paunonen, and Laippala (2000), and İlhan, Durukan, Taner, Maral, and Bumin (2008). Whilst Koivula et al. (2000) found that a higher level of burnout occurred amongst older nurses than younger ones, İlhan et al. (2008) found that that younger nurses are more prone to emotional exhaustion compared to the older ones.

Hayley et al., (2013) concluded after extensive research (Antoniou, Polychroni, & Vlachakis, 2006; Brewer & Shapard, 2004; Jackson & Rothmann, 2005; Patrick & Lavery, 2007) that burnout appears to develop in the early career stage of employees and consequently seems to be more prevalent in younger employees than in older employees. Possible reasons for younger employees' higher burnout levels, according to Hayley et al. (2013), appear to include a lack of skills to deal with routine day-to-day problems arising in the workplace, a "reality shock" when just entering the workplace, and a lack of coping skills. Rothmann and Barkhuizen (2008) noted that South African studies have found similar results as international findings which showed that burnout is more prominent for younger employees.

4.4.1.2 Age and Work-Engagement

In the era of a greying workforce, employees and their employers are concerned with the impact of the aging workforce on the level of engagement at work (Kim & Kang, 2017). Bezuidenhout and Cilliers (2011) state that employers are committed to enhancing the work engagement of the multi-generational workforce of today and are particularly interested in determining how age affects employee engagement and how employee engagement can be maximised.

The findings of the 'Age and Generations Study' conducted at Boston College provided a list of the overall drivers of employee engagement; that is, characteristics of employees associated with higher levels of engagement (Pitt-Catsouphes, Matz-Costa, & Besen, 2009). The first and most important driver was

identified as age (being older) and the second as gender (being female) (Pitt-Catsouphes & Matz-Costa, 2009) (as cited in Bezuidenhout & Cilliers, 2009).

Billett, Dymock, Johnson, and Martin (2011) state that according to popular beliefs, older employees are sometimes associated with diminishing motivation and enthusiasm for work. However, contrary to the myths about older workers being less engaged, statistics have shown that the level of engagement is higher as people age (Kim & Kang, 2016). The theory behind this stems from Socio-emotional Selectivity Theory (Carstensen, Isaacowitz, & Charles, 1999), which states that as a result of the shift in the time-perspective in later adulthood, older individuals not only favour emotional information over the non-emotional information, but they also seem to prefer positive emotional information and avoid the negative ones (Carstensen & Mikels, 2005). This supports the idea that older employees generally tend to place more emphasis on the positive aspects of their job rather than on the negative ones and therefore experience higher work engagement (Hayley et al., 2015). This view was shared by James et al. (2011), who found that older workers displayed significantly higher levels of engagement than their younger colleagues. Slightly less favourable results were however reported by Schaufeli (2004) who only found a weak positive relationship between work engagement and age. Schaufeli and Bakker (2003) calculated correlation coefficients between age and work engagement ($r = 0.14$); age and vigour ($r = 0.05$); age and dedication ($r = 0.14$); and age and absorption ($r = 0.17$).

Contradictory results were reported by Avery, McKay, and Wilson (2007) who found a low negative correlation between age and work engagement. Unfortunately, numerous studies on work engagement either did not include age as a control variable, or did not report on the correlation between age and work engagement (e.g., Biggs, Brough, & Barbour, 2014; Brough et al., 2013; Hakanen, Perhoniemi, & Toppinen-Tanner, 2008; Halbesleben, Harvey, & Bolino, 2009; Matthews, Mills, Trout, & English, 2014; Schaufeli & Bakker, 2004a; Shimazu et al., 2008). It is therefore difficult to assume an informed opinion on the prevailing relationship between work engagement and age.

4.4.1.3 Age and Workaholism

A large body of research over the years has sought to investigate the correlates of workaholism (Taris, Van Beek, & Schaufeli, 2012) – the compulsion or the uncontrollable need to work incessantly (Oates, 1971). However, at present, little is known about the extent to which demographic factors, such as age, correlate with workaholism. Some of the limited research into the subject will be discussed below.

Sussman (2012) conducted a study to determine how the age of a workaholic interacts with a context. Focusing on the socio-environmental context, Sussman (2012) concluded that a young worker with no family is likely to feel a sense of accomplishment and receive relatively few social criticisms relative to an older person with a spouse and children who exhibits the same behaviour. According to Andreassen et al. (2016), the growing body of research tends to show that workaholism affects younger (rather than older) adults more. This may be due to a number of factors; firstly, it may be interpreted as a cohort-affect suggesting that workaholism is on the rise (Andreassen et al., 2016). Alternatively, it may reflect an age-affect suggesting that problems with workaholism tend to reduce as an individual becomes more mature (Andreassen et al., 2016). It is also possible, according to Andreassen et al. (2016), that it simply reflects adjustments people make or are forced to make (e.g., poorer health) and obligations that come with age (e.g., having a family).

Clark et al. (2016) who focused on the relationship between the demographic variables of gender and age on workaholism, found that for samples with a greater percentage of women, the relationship between age and workaholism was positive, meaning that older women were more likely to be workaholics than younger women. Clark et al. (2016), further found that samples, which has more men, the relationship between age and workaholism is negative, meaning that older men were less likely to be workaholics than younger men.

4.4.1.4 Age and Job Satisfaction

Over the years, several investigators have studied the relationship between age and job satisfaction (Bernal, Snyder, & McDaniel, 1998). In fact, according to Saner and Eyüpoğlu (2012), along with gender, age is probably the most researched characteristic in respect to its association with job satisfaction. The results of the research, according to Bernal (1998), have been very contradictory.

Early research by Glenn, Taylor, and Weaver (1977) among American workers found a positive association between employee age and job satisfaction. Similarly, Rhodes (1983) concluded that overall job satisfaction was positively and linearly associated with age. Rhodes (1983) arrived at this conclusion after an extensive review of the findings from eight separate studies. A possible explanation for the observed positive relationship, according to O'Brien and Dowling (1981), is that influences associated with aging (e.g. higher income and more responsible jobs) increase job satisfaction. As workers grow older, they

tend to find more satisfying jobs through seniority and experience (O'Brien & Dowling, 1981). Other studies have however suggested a U-shaped or non-significant relationship (Luthans & Thomas, 1989; Clarke, Oswald, & Warr, 1996). Luthans and Thomas (1989), reported a curvilinear relationship between age and job satisfaction, in a study of 81 employees with supervisory responsibilities from manufacturing, service, government and retail organisations. According to Luthans and Thomas (1989), job satisfaction was medium high for supervisors approaching their mid to late thirties, highest for supervisors in their forties, and lower for those in their fifties and sixties. Therefore, the authors concluded that a curvilinear relationship existed between age and job satisfaction with the bend occurring after the supervisors had passed the age of 40 (Luthans & Thomas, 1989).

To account for this, early research found on age and job satisfaction, Mottaz (1985), listed four possible reasons to account for the reported age variations in job satisfaction. These include:

1. Cohort differences – where younger workers place significantly greater importance on intrinsic rewards such as interesting and challenging jobs when compared with older workers, who tend to focus more on extrinsic rewards such as pay and fringe benefits. Therefore, younger workers tend to be more dissatisfied than older workers since they demand more work than their jobs can provide;
2. Job change - older workers have more seniority and work experience, which allows them to move easily into more rewarding and satisfying jobs;
3. Grinding down - older workers believe rewards such as interesting work, autonomy, promotions, are less important and more difficult to achieve and therefore they are more satisfied with their work as compared to younger workers and demand less from their jobs;
4. Accommodation – Once having remained in their occupational roles for some time, workers tend to amend their work values to the conditions of the workplace and this leads to greater job satisfaction (Mottaz, 1985).

Recent research has also confirmed that the age-job satisfaction relationship increases with age (Ng & Feldman, 2010). Schultz and Schultz (2006) concluded that young workers are not satisfied at work due to the disappointment that they perceive from their first job, which did not give them the expected challenges and responsibility. Similarly, Kumar and Giri (2009) reported that job satisfaction increased based on work experience, therefore, it could be deduced that older employees will report a higher level of satisfaction as a result of their higher level of experience. This confirmed the early research by O'Brien and Dowling (1981). Boumans et al. (2011) studies age differences in work and motivated that older

employees appeared to be more satisfied intrinsically with their jobs than younger employees. Carrillo-García et al., (2013) studied job satisfaction among healthcare workers and focused on the mediating role of gender and age. A further study by Dobrow Riza, Ganzach, and Liu (2015) concluded that as people aged and transitioned from organisation to organisation, their satisfaction increased.

It can thus be concluded from the above discussion that an employee's job satisfaction increases with their age.

4.4.2 Job Demands-Resources

4.4.2.1 Job Demands-Resources and Burnout

The JD-R model (Bakker & Demerouti, 2007; Demerouti et al., 2001) can be used to predict burnout. The early JD-R model suggested two processes that resulted in the development of burnout (Schaufeli & Taris, 2014). First, according to Bakker and Demerouti (2007), there exists long-term excessive job demands which employees do not effectively recover from, and these typically result in sustained activation and overtaxing and eventually results in exhaustion, which is the energetic component of burnout. Secondly, according to Bakker and Demerouti (2007), a lack of resources hinders the process of job demands being met and work goals from being reached, which result in withdrawal behaviour. Accordingly, withdrawal, or reduced motivation/disengagement, (i.e., the motivational component of burnout) then acts as a self-protective tactic to avoid further energy depletion (Schaufeli & Taris, 2014). Theoretically, it has been argued that the interaction between job demands and job resources is imperative for the development of burnout, i.e., exhaustion and disengagement. However, there has been little empirical evidence to support such an interaction affect (Schaufeli, 2014). Hudek-Knežević, Kalebić Maglica, and Krapić (2011) note that there are several factors, which are associated with job demands, that will ultimately have an undesirable affect on job burnout. The authors state that job burnout stems from the result of job demands that are too high, a lack of satisfactory personal and job resources, or a combination of the two (Hudek-Knežević et al., 2011). Therefore, job burnout can be caused by environmental as well as individual factors. Deery et al. (2012) state that some of the most important of these factors include; workload, role overload, work pressure and role conflict.

There have been several studies that have investigated the relationship between job demands-resources and burnout. Bakker et al. (2003) found a negative relationship between the lack of job resources and the burnout dimensions. The authors concluded that job demands are unique predictors of burnout. Schaufeli

and Bakker (2004) concluded from a multi-sample study that an exceptionally strong relationship exists between job demands and burnout. Bakker, Demerouti, and Euwema (2005), note from a study of employees that worked in higher education in the Netherlands, that the job resources of job autonomy, social support from colleagues, and high-quality relationships with supervisors drastically cushioned the impact of the job demand and work overload on the burnout construct exhaustion. Melamed, Shirom, Toker, Berliner, and Shapira (2006), state that literature suggests that burnout will lead to health problems, such as depression, cardiovascular disease, or psychosomatic complaints. Thus, burnout is expected to mediate the relation between job demands and employee health and wellbeing (at least partly), through the gradual draining of mental resources (i.e., burnout) (Melamed et al., 2006). In a study conducted by Hakanen et al. (2008), job demands such as quantitative workload, demanding work content and poor physical work environment predicted burnout over a three-year period. Maslach and Leiter (2008) posited that the presence of specific demands (i.e. role stress) and the absence of specific resources (i.e. self-efficacy) predict burnout, leading to negative results such as job dissatisfaction, absenteeism, and reduction of organisational commitment. A study by De Beer et al. (2012) found a negative relationship between job resources (growth opportunities, supervisor and colleague support, role clarity and communication) and burnout within the South African context, demonstrating that job resources are essential in the buffering of burnout. Yener and Coskun (2013) found that development opportunities and co-workers support were negatively related to burnout levels, while work overload and role conflict was positively related.

From the above, it can be concluded that both job demands, and job resources are related to the construct of burnout, with both having differing effects and impacts.

4.4.2.2 Job Demands-Resources and Work-Engagement

Similar to that of burnout, the JD-R model can also be used to predict work engagement. Since its inclusion in the JD-R model in 2004 by Schaufeli and Bakker, work engagement has been considered as a significant mediator in the relationship between job demands and resources. According to the JD-R model, two types of working conditions may produce engagement: job demands (i.e. role stress) and job resources (i.e. self-efficacy). Bakker and Demerouti (2008) stated that motivating characteristics of the job (i.e., job resources), together with aspects of the self, which is related to resilience (i.e., personal resources), have been found to be important for the development of work engagement. According to Schaufeli and Bakker (2004), job resources are the most important predictors of work engagement, as

work engagement is positively associated with job resources (job characteristics that deal with demands, which help in achieving goals, or foster employee development). The positive nature of work engagement leads workers to form their own positive feedback in terms of appreciation, recognition, and success (Bakker & Demerouti, 2008). Bakker and Demerouti (2008) found that engaged workers transferred their enthusiasm and energy with them outside of the organisation and generally felt a sense of accomplishment at the end of the workday.

According to Xanthopoulou et al. (2009), work engagement mobilizes job resources in two ways. First, engaged employees are driven to achieve work objectives and look to stimulate or create job resources that will aid in achieving these objectives (for example, they search for help information, or feedback) (Xanthopoulou et al., 2009). Second, engaged employees are more likely to succeed in achieving their goals, which results in them feeling more capable, valuable, and optimistic about work (Xanthopoulou et al., 2009). Hansez, Demerouti, and Chimel (2012) state that studies have shown that work engagement and job resources are reciprocally linked; resources lead to work engagement and work engagement leads to even more resources. This process refers to gain spirals defined as “amplifying loops in which cyclic relationships among constructs build on each other positively over time” (Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010, p. 119) (as cited in Hansez et al., 2012). In addition to resources, employees’ further experience demands which arise from both external and internal forces (Hansez et al., 2012). External job pressures, which are defined by Hall and Lawler (1970) as expectations and demands, arise from the environment. Hall and Lawler (1970) further state that workers also experience internal pressures, which arise from personal demands, which they place on themselves (Hansez et al., 2012).

Research has increased in recent years with regards to job demands-resources and engagement. According to Bakker and Demerouti (2007), research has revealed that job demands such as that of high work pressure, emotional demands, and role stress may lead to exhaustion, disengagement, low job satisfaction, and impaired health; whereas job resources such as support, performance feedback, and autonomy may instigate a motivational process, leading to work engagement. Christian, Garza, and Slaughter (2011) found that the job resources, which most strongly predicted work engagement included; task variety, task significance, autonomy, feedback, social support from colleagues, a high-quality relationship with a supervisor, and transformational leadership. According to Bakker and Demerouti (2011), recent research has shown strong and positive relationships between job resources and work engagement, and negative relationships between job demands and work engagement (Schaufeli & Taris,

2014). Brough et al. (2013) examined samples of employees from thirteen Australian and two Chinese organisations and stated that both job resources and job demands were positively related to work engagement. In a study conducted by Orgambidez-Ramos, Borrego-Alés, and Mendoza-Sierra (2014), investigating the relationship between role stress and work engagement, the results confirmed the relationship between the two constructs. According to Orgambidez-Ramos et al. (2014), their findings confirmed that role stress was negatively correlated to work engagement. The authors state that this meant that an employee's engagement level would decrease when they are presented with increased levels of stress. This resonates with the JD-R model, which found that when job demands (role stress) increased, engagement went down. According to Bakker and Demerouti (2008), inadequately designed job or chronic job demands exhaust an employee's mental and physical resources, which results in the reduction of energy, absorption and dedication related to engagement.

According to Rothmann and Jordaan (2006), limited information is available pertaining to the relationship between job demands and work engagement. Theoretically, the JD-R model does not assume any direct connotation of job demands with work engagement as mentioned by Schaufeli and Bakker (2004), and rather seems to relate to engagement in both positive (Van den Broeck et al., 2008) and negative ways (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007).

4.4.2.3 Job Demands-Resources and Workaholism

Bakker and Demerouti (2017) state that in the context of the JD-R model, workaholism has generally been treated as a personal resource. According to Molino, Bakker, and Ghislieri (2016), there are a lack of studies, which have investigated the relationship between working conditions (i.e. job demands and resources) and workaholism. Clark et al. (2016) confirmed that the relationship between job resources and workaholism has not been studied often.

A review of the limited existing literature between job demands-resources and workaholism has found varying relationships between the constructs. With regard to research between job demands and workaholism, Erden (2013) states that under high demanding conditions; one should likely expect workers to become workaholic. Molino et al. (2016) and Schaufeli et al. (2008) found that role conflict, workload, cognitive demands, and emotional demands were found to be positively related to workaholism. Winefield (2002) stated that a prevalent demand among workers is workload. According to the authors, work pressure and time pressure involve having too much to do in the time frame available, and this is

often treated as an indicator of workload. Karasek and Theorell (1990) state that workload is considered as a central component for job demands for the majority of workers, and Schaufeli et al. (2008) concluded that it has a positive relationship with workaholism. Schaufeli (2008) further found that quantitative demands (e.g., work overload, mental and organisational demands) are more important for working excessively than working compulsively. For example, according to Schaufeli (2008), work overload was found to be the most important predictor for working excessively, whereas its relationship to working compulsively was relatively weak. Conversely, qualitative demands (e.g., work–family conflict, mental and emotional demands) are important for both dimensions (Schaufeli et al., 2008).

A study by Schaufeli et al. (2008) confirmed that both dimensions of workaholism was found to be related to a lack of resources. In the study by Schaufeli et al. (2008) it was concluded that workaholism was related to a lack of supervisory support, which the authors suggested might be due to that fact that workaholics work in unfavourable psychological environments. A contrasting study by Caesens et al. (2014) found that co-worker support was the only work-related social support, which was negatively related to workaholism. Hakanen et al. (2012) stated that workaholics are known to create self-imposed demands, and therefore, tend to make their work more complicated than is actually necessary. This view was supported by Hakanen and Peters (2015), who stated that professional groups with high job autonomy, tend to promote both engaged and workaholic tendencies.

In sum, the above discussion has highlighted that workaholic employees are likely to experience more job demands and less job resources than non-workaholic employees (Schaufeli et al., 2009), indicating that a relationship exists between job demands and resources and the construct of workaholism.

4.4.2.4 Job Demands-Resources and Job Satisfaction

Job satisfaction is an important factor affecting workforce productivity. There is limited theoretical research illustrating the direct relationship between job demands-resources and job satisfaction. According to Schaufeli et al. (2002) job resources are likely sources for generating positive feelings due to the beneficial impact they have on the individual, such as being a predictor of motivation and learning related outcomes. Accordingly, in the presence of high job resources, employees are likely to have more positive attitudes about the organisation and as a result, exhibit higher job satisfaction (Schaufeli et al., 2002). Job resources are thought to lead to job satisfaction at many different levels and in many different ways; at the organisational level (e.g., pay, career opportunities, job security), through interpersonal and social relations (e.g., supervisor and co-worker support), in the organisation of work (e.g., role clarity,

participation in decision making), and at the task level (e.g., skill variety, task identity, task significance, autonomy, performance feedback) (Ryosho, 2010).

Research pertaining to job demands on the other hand has shown that job demands are negatively related to job satisfaction (e.g. Macklin, Smith, & Dollard, 2006; Pomaki et al., 2004; Willemse & De Beer, 2012). It is important to note that job demands decrease job satisfaction specifically, though no clear theoretical foundation has been identified (Bakker & Demerouti, 2007). What has been found is that job demands “exhaust employees’ mental and physical resources and therefore tends to result in the depletion of energy and lead to health problems” (Bakker & Demerouti, 2007, p. 313). This corresponds with the job demands definition, which seems to relate this process to both physiological and psychological outcomes (Bakker & Demerouti, 2007).

Yeh (2015) who conducted a study to investigate how job demands and resources influence job satisfaction found that job resources (i.e., earnings, job content, and workplace relations) increase job satisfaction more than job demands (i.e., working hours, workloads, and WFC). This contradicted a study by Drobnič, Beham, & Präg (2010) who in a cross-national analysis of nine European countries, reported that bad jobs reduce job satisfaction and quality of life more than good jobs enhance them. When conducting an examination of job satisfaction and its relationship with job control and job demands, Green and Tsitsianis (2005, p. 420) find that work intensity has a “strong negative and significant impact on job satisfaction”.

Though limited evidence is available, existing studies have shown that a relationship exists between job demands and resources and the construct of job satisfaction.

4.4.3 Work-Related Sense of Coherence

Owing to the fact that Work-SoC is a relatively new concept, there is limited research how it relates to the employee wellbeing indicators that are investigated in this study. Existing literature will be discussed below.

4.4.3.1 Work-Related Sense of Coherence and Burnout

The problem of occupational burnout is becoming an increasingly common phenomenon, concerning more and more professions. As discussed in the aforementioned section, sense of coherence is a coping resource that is presumed to mitigate life stress by affecting the overall quality of an individual’s cognitive

and emotional appraisal of the stimuli that impact on an individual. Whilst there are limited studies that have looked at the relationship between Work-SoC and burnout, there have been numerous studies that have examined the relationship between SoC and burnout within the work context.

Rothmann et al. (2003), state that general sense of coherence has negative correlations with the dimensions of burnout and aids to improve sense making of events, appraisal of whether resources are sufficient to deal with events and increases of control. This line of thinking was confirmed by Strümpfer (2003), who concluded that sense of coherence plays an instrumental role in warding off burnout and recovering from it.

An early study by Gilbar (1998) found significant correlations between social workers' sense of coherence and exhaustion ($r = -0.30$), as well as their sense of coherence and personal accomplishment ($r = -0.34$). Levert, Lucas, and Ortlepp (2000) reported significant correlations between two components of burnout (exhaustion and depersonalisation) and sense of coherence in a study among a group of psychiatric nurses in South Africa as cited in Rothmann et al. (2003). When investigating burnout in relation to sense of coherence, Rothmann, Malan, and Rothmann (2001) found that sense of coherence was significantly correlated with exhaustion (-0.56), depersonalization (-0.41) and personal accomplishment (0.48). A study by Rothmann, Steyn, and Mostert (2004) carried out in an electricity supply organisation in South Africa concluded that that SoC played a mediating role between the job stresses and wellness. The study further revealed that employees with a strong sense of coherence were found to be experiencing less burnout and more work engagement because they perceive the environment to be more comprehensible, manageable and meaningful (Rothmann et al., 2004). A further study by Rothmann (2005) showed that a strong sense of coherence mediates the relationship between job stress and work wellness (consisting of low burnout and high work engagement).

With regard to the specific relationship between Work-SoC and burnout, Vogt et al. (2013) concluded that Work-SoC is negatively related to job demands and burnout; however, it was positively related to job resources (Vogt, Jenny, Fülleman, Inaunen, & Bauer, 2012).

4.4.3.2 Work-Related Sense of Coherence and Work-Engagement

Sense of coherence may either alleviate or aggravate stress reactions, especially within the context of the work environment (Antonovsky, 1987, p. 165). According to Antonovsky (1987), both the detrimental and

the health-promoting consequences of working processes were the subjects of his writing on salutogenesis and sense of coherence at work. Antonovsky (1987a) stated a refinement must be made between the disposal of stressors and the improvement of health-enhancing work characteristics.

Early studies looked specifically at the relationship between SoC and work-engagement. Rothmann et al. (2003) found that there was a positive relationship between work-engagement and SoC. A study by Rothmann et al. (2005) showed that sense of coherence is moderately related to work engagement. Naudé and Rothmann (2006) concluded that people with a strong sense of coherence were also found to experience more work engagement. Van der Colff and Rothmann (2009) found that there was a positive relationship between work-engagement and SoC.

After the introduction of the concept of Work-SoC, Van der Westhuizen (2018) conducted a study to investigate whether Work-SoC, as a context-specific application of sense of coherence, provides incremental validity over and above sense of coherence in explaining indicators of work wellness. According to the results, Work-SoC significantly predicted work engagement. It was further found that Work-SoC also appeared to be a stronger predictor of work engagement in comparison with SoC (Van der Westhuizen, 2018). However, according to Van der Westhuizen (2018), SoC seems to be a better predictor of fatigue in comparison with Work-SoC. These results would suggest that Work-SoC appears to be a better predictor of work engagement than of fatigue in comparison with SoC (Van der Westhuizen, 2018). According to Van der Westhuizen (2018), the results also seem to corroborate earlier findings of Vogt et al. (2013) who reported that the mediating affect of Work-SoC was stronger between job resources and work engagement than between job demands and burnout.

4.4.3.3 Work-Related Sense of Coherence and Workaholism

There is very little documented evidence or research on workaholism and work-related sense of coherence, or general sense of coherence. Research has however revealed that sense of coherence can be a very valuable tool as a coping resource (Vogt et al., 2013), for those who experience stressful situations, such as workaholics.

Scott et al. (1997) identified the common characteristics of workaholism as; 1) people who spend a great deal of time on work activities when given the discretion to do so – they work excessively hard, 2) those who are reluctant to disengage from work and are persistently and frequently thinking about work – they

are obsessed with their work, and 3) those who go beyond what is reasonably expected from them to meet organisational goals. According to Bakker and Demerouti (2008), workaholics work hard because of a strong and irresistible inner drive. In order to be able to deal with pressures that are imposed on workers due to their workaholic tendency, a strong coping resource becomes beneficial, such as sense of coherence. The concept of sense of coherence implies that stressors experienced can be viewed as positive and meaningful challenges, which can be managed in a way that results in optimal outcomes (Antonovsky, 1987). According to Antonovsky (1993), individuals that function with this view of life usually have resistance to the effects of stress and are more capable of experiencing stressful situations without experiencing the negative effects thereof. A strong sense of coherence would result in a person; 1) making cognitive sense of the workplace, perceiving stress as clear, ordered and consistent; 2) perceiving work as consisting of experiences that are bearable, with challenges that can be met by availing oneself with personal resources under the control of legitimate others; 3) making emotional and motivational sense of work demands, as welcome challenges worthy of engaging in and investing energy in.

The view that a strong SoC can aid as a coping resource to workaholics was suggested by Kalimo and Vuori (1990) and Reynold and Greenfield (1991) who concluded that there is a strong connection between sense of coherence, and the ability to cope with stressful situations such as pressure at work.

4.4.3.4 Work-Related Sense of Coherence and Job Satisfaction

According to Strümpfer and De Bruin (2009), job satisfaction is a popular study area in industrial psychology, possibly because of the theoretical and practical attractiveness of a causal link between happiness on the job and improved job performance. On theoretical grounds, it seems likely that an individual with a strong SOC would experience higher job satisfaction (Strümpfer & De Bruin, 2009). According to Antonovsky (1987) individuals high on SOC will probably see the tasks put to them as challenges, they will impose structure on the tasks and thereafter try to search for appropriate resources, which is likely to allow them to find or create fulfilling and challenging job environments and to attract social support. In contrast, individuals with low SOC, will be more likely to experience tasks that they are confronted with as incomprehensible and potential sources of failure, which is likely to lead them to become unmotivated, to gravitate to repetitive and uninspiring job environments, and to become alienated (Antonovsky, 1987). Unfortunately, the theoretical link between SoC and job satisfaction has received relatively little research attention (Strümpfer & De Bruin, 2009),

With regard to empirical research between SOC and job satisfaction, results from studies by Judge, Locke,

Durham, and Kluger (1998) and Coetzee and Rothmann (1999), provided strong support for the hypothesis that SOC is positively related to job satisfaction. Lustig and Strauser (2002) found that SoC was the differentiating factor among fulfilled/competent employees and unfulfilled/incompetent employees. In a study conducted by Strümpfer and De Bruin (2009) investigating SOC in relation to job satisfaction, results provided strong support that the SOC exhibited by employees was strongly, and positively related to job satisfaction. A review of literature has confirmed that to date, there have not been any known studies that have reported on the relationship between Work-SOC and job satisfaction.

4.5 CHAPTER SUMMARY

Chapter four addressed the second research aim, namely, to conceptualise the psychosocial antecedent variables; age, job demands, job resources and work-related sense of coherence; and how these are conceptualised and explained by theoretical models in the literature. In addition, the relationship between each of the psychosocial antecedent variables with occupational wellbeing and its indicators was explored and discussed.

Chapter 5 addresses the third research aim, namely, the conceptualisation of the positive and negative outcome variables; organisational commitment and turnover intention.

CHAPTER 5

POSITIVE AND NEGATIVE OUTCOMES OF OCCUPATIONAL WELLBEING

In this chapter, the third research aim will be addressed, namely, to conceptualise the positive and negative outcome variables, organisational commitment and turnover intention, and discuss the way theoretical models in the literature explain such variables. Furthermore, the relationship between both variables with occupational wellbeing, and thereafter with each of the specific wellbeing attributes that are investigated in this study, is explored and discussed.

5.1 Outcomes

5.1.1 Conceptualisation of Outcome Variables

In short, the outcome is the attribute that a researcher believes may be predicted or affected by other attributes (Salkind, 2012). Outcomes (also called events or endpoints) are variables that are monitored during a study to document its population impact (Ferreira & Patino, 2017). Most research measures one or more outcome variables (Ferreira & Patino, 2017). According to Vetter (2017), an outcome variable is believed to change as a result of a change in a predictor variable and is directly measured by the researcher during a study or experiment. Statistical analysis is subsequently performed on outcome measures, and conclusions are deduced from statistical analysis (Vetter, 2017).

5.1.2 Outcomes Investigated in Current Study

This research focuses on determining occupational wellbeing types based on a composite set of employee wellbeing attributes (comprising work engagement, job satisfaction, burnout and workaholism), which was discussed in Chapter 3, and determine how the types differ with regard to the psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), discussed in Chapter 4. The result of the occupational wellbeing types is either positive or negative outcome variables, comprising organisational commitment and turnover intention. Literature reveals that organisational commitment and turnover intention are important considerations in the healthcare industry (Chen et al., 2015; Collini, Guidroz, & Perez, 2015).

5.2 POSITIVE AND NEGATIVE OUTCOMES

5.2.1 Conceptualisation of Organisational Commitment – Positive Outcome

Organisational scholars began to seriously conceptualise the notion of organisational commitment (OC) in the 1960s (Kessler, 2013). The concept attracted much interest as it was observed as an attempt to understand and clarify the intensity and stability of an employee's dedication to an organisation (Lumley, 2010).

With time, several definitions emerged on how to conceptualise organisational commitment (Alluto, Hrebiniak, & Alonso, 1973; Arnold, 2005; Becker, 1960; Meyer & Allen, 1991; ; Mowday, Cohen, 2007; O'Riley, 1989, p. 17; Porter, & Steers, 1982, p. 26; Porter, Steers, Mowday, & Boulian, 1974, p. 604; Weiner & Vardi, 1980, p. 90).

Kessler (2013) conducted a review of literature on OC and concluded that there are three main approaches in defining and measuring organisational commitment, namely, the calculative approach, attitudinal approach, and the multidimensional approach, each of which are briefly discussed hereunder.

- *The Calculative Approach*

This approach vests in the “side bet” theory of Howard Becker and refers to the accumulation of investments which are valued by an individual that would be lost or deemed worthless if such person elected to exit an organisation (Kessler, 2013). Measures reflecting this approach were developed in the late 1960s and 1970s (Kessler, 2013). According to this approach, the threat of losing one's investments, together with the perceived lack of alternatives for replacement, results in an individual committing to an organisation (Kessler, 2013).

- *The Attitudinal Approach*

This approach is also called the “organisational behaviour” or “psychology” approach and sees commitment as affective or attitudinal (Kessler, 2013). According to this approach, employees feel committed to an organisation because of identifying strongly with organisational values and goals (Kessler, 2013). Under this approach, commitment has three dimensions: a) the desire to maintain membership in an organisation; b) the belief in and acceptance of the values and goals of an organisation; and, c) the willingness to exert effort on behalf of the organisation (Kessler, 2013).

According to Kessler (2013), commitment under the attitudinal approach is also termed affective commitment and value commitment.

- *The Multidimensional Approach*

According to this approach, Meyer and Allen (1984) argue that organisational commitment is best understood as a multidimensional concept, and propose a two-dimensional measure of OC (Kessler, 2013). Conceptually, Meyer and Allen's (1984) distinction between the two dimensions, parallel the side-bet calculative approach of Becker and the attitudinal approach (Kessler, 2013). The first dimension is termed affective commitment (commitment is seen as an affective point of reference towards the organisation), and the second is termed continuance commitment (acknowledgement of the consequences of leaving the organisation) (Meyer & Allen, 1991; Kessler, 2013). A few years later, Meyer and Allen (1990) added a third dimension, normative commitment (an ethical responsibility to stay with the organisation) (Meyer & Allen, 1991). At present, this multidimensional approach is the prevailing approach to OC (Kessler, 2013).

This study views organisational commitment based on the conceptualisation by Meyer and Allen (1991). According to Meyer and Allen (1991, p. 67), OC is defined as: 'the emotional attachment to, identification with, and involvement in the organisation'. In this regard, organisational commitment is regarded as an attitude, as it relates to individual mindsets about the organisation (Allen & Meyer, 1990). Meyer and Allen (1997) further state that as a result of the psychological connection that individuals have with the organisation, and the strong identification with the organisation, employees have a strong desire to contribute to the accomplishment of organisational goals. The multidimensional approach to OC by Meyer and Allen (1990) reflects three core dimensions, namely, affective, continuance and normative commitment. Each of these dimensions are discussed in further detail hereunder.

- **Affective Commitment (AC)**

This dimension is defined as positive sentiments of distinguishing an employees identification with, connection to and association in the work environment. (Meyer & Allen, 1984). According to Meyer and Allen (1991) AC highlights an individual's psychological or emotional connection to an organisation, and employees that are affectively committed to an organisation tend to continue working due to personal desire to do so (Meyer and Allen, 1997).

- **Continuance Commitment**

This dimension is defined as “the extent to which employees feel committed to their organisation by virtue of the costs that they feel are associated with leaving” (Meyer & Allen, 1984, p. 375). According to Meyer and Allen (1997), due to employee awareness or consideration of expenses and threats that are associated with exiting an organisation, continuance commitment is considered calculative. Lumley (2010) points out that employees with continuance commitment remain in an organisation due to the money earned as a result of the time spent in the organisation, and not because of personal desire to do so.

- Normative Commitment

This dimension is defined as “the employee’s feelings of obligation to remain with the organisation” (Allen & Meyer, 1990, p. 6). According to Meyer and Allen (1997) normative commitment is best explained as a sense of responsibility to continue employment with a specific organisation, due to an internalised idea that responsibility and commitment allow continued membership which will be appreciated by the organisation (Allen & Meyer, 1990).

Common to the abovementioned three dimensions of organisational commitment is the view that organisational commitment is a psychological state which characterises organisational members' relationship with the organisation and has implications for the decision to continue or discontinue membership in the organisation (Meyer & Allen, 1997).

Saari and Pyöriä (2015) agree with Meyer and Allen (1984, 1990, 1991) and state that the theoretical definition of OC reflects the assumption that an employee is keen and willing to remain a member of an organisation, and to work towards achieving shared values and objectives. Jung and Ritz (2014) indicate that highly committed employees do not simply do the job; instead, such employees own it and do the best that can be done. These individuals are dedicated to organisational goals, are highly engaged in performing work-related tasks, and speak positively about the organisation, both internally and externally, genuinely caring about the employer’s reputation.

Meyer and Allen (1990) conclude that a committed workforce is an added advantage to an organisation, as it forms part of an organisation's competitive advantage. As a result, organisational commitment has a long history, one which has been the theme of vast research and empirical attention (Martin & Roodt, 2008). Over time, commitment evolved as a wide range of ‘types’ (e.g. engagement, attachment,

commitment, involvement) within a wide spectrum of focus (e.g. work, job, career, profession/occupation, organisation, union), and studies on commitment varied between the categories of behavioural, attitudinal and motivational (Martin & Roodt, 2008). Notwithstanding the lack of consensus on various definitions, conceptualisations, and measurements, a common theme surfaced and is shared across all such deviations, namely that organisational commitment is considered to be a bond or link of the individual to the organisation (Martin & Roodt, 2008).

Subsequently, the negative outcome that is investigated in this study, namely, turnover intention, will be conceptualised hereunder.

5.2.2 Conceptualisation of Turnover Intention - Negative Outcome

Employee turnover is of growing concern to organisations (Horn, Lee, Shaw, & Hausknecht, 2017) as it results in costs and negative consequences for any organisation (Bothma & Roodt, 2013; Du Plooy & Roodt, 2013; Takawira, Coetzee, & Schreuder, 2014). According to Owen (1813), the acknowledgment of employees to an organisation dates back to the Renaissance. This stems from the imperative role they play in both creating and sustaining an organisation's competitive advantage (Grant, 2010). In fact, according to Horn et al. (2017), the first empirical study on employee turnover dates back to 1925. Currently, employee turnover remains an important issue, within the field of human resource management and industrial psychology, which has attracted the interest of practitioners worldwide (Ongori, 2007).

Turnover is defined as the aggregate of worker replacements in a given period in a given business or industry and can be explained as an organisational or individual phenomenon (Hinshaw & Atwood, 1984). According to Ellett, Elliss, and Westbrook (2007), turnover can be classed into three different categories, namely: 1) unavoidable turnover, which may occur due to retirement, sickness or family matters; 2) desirable turnover which applies to incompetent employees and; 3) undesirable turnover which occurs when talented, skilled and competent employees leave an organisation against the wish of their employers.

Turnover intention is defined as the manifestation of the subjective likelihood that a person will alter his or her work within a defined time period. '(Sousa-Poza & Henneberger, 2002). Many definitions of turnover intention have been put forward, however, according to Bester, Stander, and Van Zyl (2012), the

concept of turnover intention is seldom clearly defined in studies, and this contributes to the assumption that people perceive the term as self-explanatory.

Wilson (2009) states that turnover intention literature uses various terms interchangeably to describe the construct, which includes the propensity to leave, the intention to stay or exit, the intention to leave, and the intention to quit. One of the most popular definitions of the construct is from Tett and Meyer (1993, p. 262) who defined turnover intention as being “conscious and deliberate wilfulness to leave the organisation”. In an attempt to clearly define turnover intention, Bester et al. (2012) stated that the intention to leave should be viewed as the final step in the decision-making process before the employee makes the final decision to leave his or her workplace. Intention to leave is then defined as “an individual’s own estimated probability (subjective) that they are permanently leaving the organisation at some point in the near future” (Vandenberg & Nelson, 1999, p. 1315) and refers to an individual’s reduced level of commitment, which results in an increased desire to exit the organisation (Mowda et al., 1982). Turnover intention may classify as either voluntary or involuntary (Ngo-Hehna, 2017). Voluntary turnover intention refers to an employee’s decision to leave an organisation at his or her own will (Albatt & Som, 2013; Lam, Chen, & Takeuchi, 2009; Dess & Shaw, 2001). Involuntary turnover intention refers to the permanent release of an employee from employment due to a number of reasons (Albatt & Som, 2013; Lam et al., 2009; Dess & Shaw, 2001).

Mossholder, Settoon, and Henagan (2005) believe that turnover intention signifies an employee’s decision to exit an organisation despite being offered the opportunity to stay. Martin and Roodt (2008) state that turnover intention is a multi-staged decision-making process which includes attitudinal, decision, and behavioural components, and it should be noted that the process is not definite, and is most often accompanied by job search behaviour (Takawira et al., 2014).

In this study, turnover intention is defined as the cognisant and intentional wilfulness to leave an organisation as defined by “the conscious and deliberate wilfulness to leave the organisation” (Tett & Meyer, 1993). The study of turnover has a rich theoretical history, one where numerous models and theories are put forward to clarify the reasoning behind why employees voluntarily choose to leave the organisation (Joseph, Ng, Koh, & Ang, 2007). A review of literature revealed the following theoretical models and theories in an attempt to explain turnover intentions: March and Simon’s Model (1958), Porter and Steers (1973), Met Expectations Model, Mobley (1977), Intermediate Linkages Model,

Sheridian and Abelson (1983), Cusp Catastrophe Model of Turnover, An Integrated Process Model (Jackosfy, 1984), Mitchell and Lee (2001) – Job Embeddedness Model (2001), Price (2001), Casual Model of Turnover, and Integrated Mediated Multi-Routes Model (Allen & Griffeth, 2003).

The model, which arguably receives the most traction, is the Linkages Model by Mobley (1977) (Hernowo, Sekarwana, & Djuhaeni, 2018). According to Hernowo et al. (2018), the model describes that in order to achieve the intention to leave, the following stages occur: 1. The employee evaluates his/her work; 2. The employee experiences job dissatisfaction; 3. The employee thinks of quitting; 4. The employee evaluates the benefit in finding other work and costs that will arise from the quitting; 5. The employee then has the intention to look for an alternative job; 6. The employee begins looking for alternative jobs; 7. The employee evaluates the existing work alternative(s); 8. The employee compares job alternatives to their current job; and finally, 9. The employee then has the intention to leave.

In addition to the various theories and models on turnover, there are two widely acknowledged perspectives on turnover intentions, namely, human capital theory and social exchange theory (Rahman & Nas, 2013). Human capital theory vests in the assumption that education is highly critical and instrumental in improving the production capacity of a population (Rahman & Nas, 2013). Once this is transported to the work environment, it means that human capital is an organisation's most valuable commodity and further suggests that the development of employees results in increasing the productivity of employees in organisations rather than the incumbent firm (Green et al., 2000) or enhancing employability in the market which may induce turnover for better jobs (Rahman & Nas, 2013). Social exchange theory postulates that relationships develop over time into trusting, loyal commitments (Cropanzano & Mitchell, 2005) and that investing in the development of employees fosters a mindset in employees that is positive toward the organisation (Rahman & Nas, 2013). The social exchange theorists (Blau, 1964; Eisenberger et al., 1986) state that employees will thereafter reciprocate it, and this will affect turnover intentions, thereby creating an aura of honouring organisation-employee relationship (Rahman & Nas, 2013).

The subsequent section explores the relationship between the positive and negative outcomes investigated in this study, and the individual relationships with occupational wellbeing.

5.3 RELATIONSHIP BETWEEN POSITIVE AND NEGATIVE OUTCOMES AND OCCUPATIONAL WELLBEING

5.3.1 Organisational Commitment and Occupational Wellbeing

Organisational commitment is one of the most investigated organisational variables and is associated with employee health and wellbeing (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Garg and Rastogi (2009) state that it can be assumed that the higher the level of commitment, the higher the level of employee wellbeing, which results in employees who are more creative, innovative, resilient, socially connected, and physically and mentally healthy.

While there have been numerous organisation-relevant variables which have been explored in relation to organisational commitment, little emphasis is placed on employee-relevant outcomes (Meyer & Maltin, 2010) such as occupational wellbeing. Available research shows that there has been consistently demonstrated positive relationships between affective commitment to an organisation and employee wellbeing (Meyer & Maltin, 2010). Upon further review of the literature exploring the links between organisational commitment and employee wellbeing, Raina (2013) found a sizeable body of research examining such links, with the majority pointing to positive links between commitment and wellbeing (Galais & Moser, 2009; Siu, 2002), self-esteem, satisfaction with life, and self-efficacy (Harris & Cameron, 2005). Siu (2002) states that committed employees cope with stress better than uncommitted employees. Furthermore, organisational commitment provides employees with stability and feelings of belonging, and thereby contributes to reduced stress and increased health and wellbeing within organisations (Siu, 2002).

In contrast, there is a sizeable body of research which has found a negative link between organisational commitment and wellbeing (Meyer & Maltin, 2010; Raina, 2013). Meyer and Maltin (2010) found that negative relations were consistently found with measures of strain which include psychosomatic symptoms (e.g., Addae & Wang, 2006; Richardson, Burke, & Martinussen, 2006), physical health complaints (e.g., Probst, 2003; Wegge, van Dick, Fisher, West, & Dawson, 2006), mental health complaints such as anxiety and depression (e.g., Epitropaki & Martin, 2005; Tucker, Sinclair, & Thomas, 2005), negative affect (e.g., Thoresen et al., 2003), burnout (e.g., Grawitch et al., 2007; Hakanen, Bakker, & Schaufeli, 2006), and felt stress, distress, general strain, and job-related tension (e.g., Daigle, 2007; Lambert, Hogan, & Griffin, 2008). Raina (2013) deduced that of the studies which reported a negative

relationship between commitment and wellbeing, negative relations were found between burnout and commitment (Grawitch, Trares, & Kohler, 2007; Lee & Henderson, 1996), psychological distress (Siu & Cooper, 1998), and strain, including emotional exhaustion and depersonalisation (Schmidt, 2007; Kalliath, O’driscoll, & Gillespie, 1998). Research specific to the South African context shows that organisational commitment moderates the affect of occupational stress within organisations (Coetzee & Rothmann, 2005).

The following section explores the relationship between the negative outcome investigated in this study, turnover intention, and its relationship to occupational wellbeing.

5.3.2 Turnover Intention and Occupational Wellbeing

The success of an organisation depends largely upon its employees. An organisation faced with the risk of the intention of employees exiting the organisation, then the organisation has long-lasting effects resulting from this challenge (Xu, Choi & Lv, 2016). Amin and Akbar (2013) state that turnover intention is an early sign of the emergence of turnover behaviour and is usually a last resort for an employee if the workplace is not relevant to what was expected.

While researchers have studied turnover for decades, the relationship between employee wellbeing and turnover has not been deeply explored (Allen, Bryant, & Vardaman, 2010). According to Samad (2006), employees who fulfil wellbeing in the workplace are more productive, contribute to an organisation’s goals, and the intention to leave the organisation is low.

Conversely, employees affected by occupational stress have the intention to change jobs (Barrick, Mount, & Strauss, 1994; Mosadeghrad, 2013). Xu et al. (2016) believe that highly committed employees wish to remain with their current employer and work towards organisational goals and thus are less likely to leave their companies (Xu et al., 2016).

According to Barrick et al. (1994), while limited evidence exists, overall wellbeing is expected to affect levels of employee commitment to jobs, psychological withdrawal from work, and the ability to perform well, all of which will likely culminate into reduced intention of leaving an organisation. Samad (2006) found that workload pressure (intensive time pressure and unrealistic productivity demand) impacts turnover rates. Dewe and Kompier (2008) conclude that negative wellbeing outcomes, such as irritability,

anxiety and depression, may lead to job dissatisfaction, work-family conflict, and the intention to exit an organisation. A study by Van der Varrt et al. (2013) demonstrates that employee wellbeing mediates the relationship between the state of the psychological contract and an employee's intention to leave the organisation. According to Amin et al. (2013), turnover intentions may be reduced if employees feel that organisations have fulfilled needs through improving wellbeing (Mosadeghrad, 2013), reduced quality of life, job satisfaction, and organisational commitment, organisational culture, job stress, burnout, long shifts, and work-family conflict are identified as variables which could force employees to leave the workplace. According to Gok, Akgunduz, and Alkan (2017) it can thus be concluded that employees who are unhappy and stressed (i.e. employees experiencing low levels of wellbeing) have a stronger intention to leave the organisation. Gok et al. (2017) indicates that it is important to note that such stressful and unfavourable working conditions arise because of the nature of the work that the employees do and the organisations with which they are affiliated. According to Amin et al. (2013), turnover intentions can be reduced if an employee feels that the organisation has met their needs, through improving psychological wellbeing.

The subsequent section explores and discusses the positive (organisational commitment) and negative (turnover intention) variables in relation to each of the employee wellbeing attributes investigated in the study.

5.4 RELATIONSHIP BETWEEN POSITIVE AND NEGATIVE OUTCOMES AND EMPLOYEE WELLBEING ATTRIBUTES

5.4.1 Organisational Commitment (Positive Outcome)

5.4.1.1 Organisational Commitment and Burnout

In today's competitive atmosphere, it is undeniable that organisations need workers with high organisational commitment and low burnout levels than ever before (Gemlik, Sisman, & Sigri, 2010). According to Shirazi, Beiki, Zamanian, and Esapour (2011), the worst impact of burnout at the organisational level is the destruction and diminishing organisational commitment among personnel and experts in their jobs.

In an effort to explain the relationship between organisational commitment and burnout, Shirazi et al. (2011) states that as the organisational commitment level of an individual increases with the contribution

to and involvement with the issues related to the organisation decreases their chances of affliction with burnout (Shirazi et al., 2011). Simply put, as organisational commitment increases, the likelihood of experiencing burnout, decreases.

A large body of research supports the relationship between organisational commitment and job burnout, with many studies devoted to explaining the two variables – the results are equivocal (Basami, Chizari, & Abbasi, 2013). A study by Mathieu and Zajac (1990) who examined the impact of stress on individuals with varying degrees of commitment, found that individuals with a higher degree of commitment to the organisation experience a great amount of stress compared to those who are less committed. King and Sethi (1997) found that organisational commitment has a moderating affect on the relationship between stress and job burnout (King & Sethi, 1997). Results from a study by Kalliath, O’Driscoll, and Gillespie (1998) show that low levels of organisational commitment are found to influence job burnout in hospital employees. Leiter and Maslach (1998) conclude that burnout and organisational commitment are correlated, and both can be affected by interpersonal environment. Tan and Akhtar (1998) report that when age, tenure, organisational level, and work perceptions of Chinese employees are controlled, organisational commitment has a significant affect on experienced job burnout. Chuo (2003) studies the relationship between organisational commitment and job burnout and conclude that normative commitment is a better predictor of depersonalisation when compared with affective and continuance commitments. Halbesleben (2004) performed research on human services personnel such as nurses, low-income employees, police force staff, and office secretaries, and studied the consequences of high burnout and low organisational commitment, and conclude that high burnout and low organisational commitment led to negative outcomes for employees such as low personnel spirit, poor performance, exhaustion, absenteeism, high rate of exiting or changing jobs, disturbance in providing office services, and other administrative and service-related problems and issues. Gemalik et al. (2010) reviewed the relationship between burnout and organisational commitment and concluded that a strong relationship exists between emotional exhaustion and emotional commitment and normative commitment.

5.4.1.2 Organisational Commitment and Work-Engagement

Work engagement and organisational commitment are among the most studied topics in a range of fields, including human resource development and industrial psychology (Jena, Bhattacharyya, & Pradhan, 2017). According to Albdour and Altarawneh (2014), both engagement and organisational commitment

are critical organisational requirements as organisations face globalisation and continue to recover from the global recession.

Recent studies appear to incorporate the concept of organisational commitment as a facet of work engagement, and therefore, view the two concepts as sharing a positive relationship (Rothmann & Jordaan, 2006). A study specific to the South African population found a positive correlation between work engagement and organisational commitment among a sample of educators (Jackson et al., 2006). When investigating the impact of work engagement on organisational commitment, Schaufeli and Salanova (2007) found that when work engagement levels increase, the level of organisational commitment increases as well, and further enhances job satisfaction, higher performance, and reveals a greater demonstration of personal ideas, higher attendance and lower turnover rates, improved health and security, proactive behaviour and learning motivation. Simpson (2009) and Andrew and Sofian (2012) also lend support to the relationship between the constructs, stating that as engagement levels increase, commitment levels also tend to increase. Studies from Christian, Garza, and Slaughter (2011), and Rich, Lepine, and Crawford (2010) demonstrate that employee engagement and organisational commitment offer companies a sustainable competitive advantage. Schaufeli and Salanova (2011) conclude that work engagement is not only positively related to organisational commitment, but it also an antecedent of commitment.

5.4.1.3 Organisational Commitment and Workaholism

A hard-working employee is often considered a valued organisational asset for commitment towards organisational goals, and workaholics are widely perceived as the hardest workers of all (Douglas & Morris, 2006).

Literature highlights an interesting relationship between workaholism and organisational commitment (Rezai et al., 2014). It is often hard to distinguish between workaholism and organisational commitment since a person who is addicted to work displays behaviour similar to that of a workaholic. For example, according to McMillian and O'Driscoll (2006), a person addicted to work devotes much more time to it than colleagues, and usually tends to stay at work after hours (when others have already left), takes work home on the weekend, and sacrifices leisure time during holidays and leave days. To many, this is perceived as strong commitment to the organisation (Rezai et al., 2014). This view is supported by Rakshanimehr and Jenaabadi (2015) who state that workaholism should be considered a type of

commitment to work. It should therefore be expected that those who feel driven to work extremely hard, achieve higher levels of organisational commitment.

According to Kuo, Su, and Chang (2016), in order to improve employee performance, organisations often encourage workaholic behaviours. For example, individuals working long and often excessive hours are perceived to be dedicated and committed staff, capable of competing with peers for rewards, recognition and career development opportunities.

Despite the obvious link which the literature highlights between the latter two components (McMillian & O'Driscoll, 2006), there are limited studies which have examined the relationship. Aziz (2003) concludes that individuals highly committed to the organisation, who are significantly involved at work, feel driven to work, dissatisfied with the job, are highly work stressed, allow work to greatly interfere with personal lives, are dissatisfied with life overall, and work a large number of hours per week, cumulatively, and are labelled workaholics. Rakhshanimehr and Jenaabadi (2015), state that all three components of workaholism are able to significantly predict organisational commitment. According to Rakhshanimehr and Jenaabadi (2015), when workaholism increases, organisational commitment increases, and vice versa.

5.4.1.4 Organisational Commitment and Job Satisfaction

Over the years, both organisational commitment and job satisfaction emerged as important concepts as both are important contributors to employee retention and reduced intention to quit (Allen & Meyer, 1996). Martin and Kaufman (2013) state that further importance of studying organisational commitment and job satisfaction is due to the fact that organisational commitment relies upon positive relationships with clientele and co-workers, and cannot afford to have employees who are not committed or happy with the organisation leave after a short amount of time. According to Martin and Kaufman (2013), job satisfaction is premised on an individual's response to a job, or specific aspects of a job, such as pay, supervision, and working conditions. Mowday, Steers and Porter (1979) stated that an employee's commitment may be seen as universal relative to their attitudes towards the organisation, as well as its goals and values Mueller, Boyer, Price, and Iverson (1994, p. 128) opine that "when employees are both satisfied with their jobs and committed to the organisation, the bond with the organisation will be strengthened and will result in greater cooperation and a reduced likelihood of quitting".

Numerous studies exist which devote significant attention to the relationship between organisational commitment and job satisfaction (Mathieu & Zajac, 1990; Martin & Bennett, 1996; Meyer et al., 2002;

Falkenburg & Schyns, 2007; Moynihan & Pandey, 2007; Morrow, 2011; Leite, Rodrigues, & Albuquerque, 2014). The consensus is that a link exists; however, there is controversy about the nature of the relationship (Kalleberg & Mastekaasa, 2001; Leite et al., 2014). One of the most debated issues is whether job satisfaction is the predictor of job organisational commitment, or vice versa (Letite et al., 2014; Srivastava, 2013). Some research supports the hypothesis that job satisfaction predicts organisational commitment (Angle & Perry, 1983; Porter et al., 1974; Price, 1977; Rose, 1991; Stevens et al., 1978; Tsai and Huang, 2008; Yang & Chang, 2008; Yücel, 2012; Valaei et al., 2016; Williams & Hazer, 1986), whilst other studies have suggested organisational commitment is an antecedent to job satisfaction (Bateman & Strasser, 1984; Curry et al., 1986; Price & Mueller, 1981; Vandenberg & Lance, 1992).

Job satisfaction and organisational commitment are two different concepts, but several studies conclude that there is indeed great correlation between the two variables (Meyer et al., 2002), as is highlighted above. Although no consensus exists as to whether heightened job satisfaction results in organisational commitment, or whether augmented organisational commitment results in a higher degree of job satisfaction, research has shown that both concepts are connected with positive organisational results such as decreased absenteeism, turnover and increased job performance (Testa, 2001). Meyer et al. (2002) state that while the variables are considered highly interrelated, both may be positively and negatively correlated. For example, an employee can have positive feelings towards the organisation, its values and objectives, but at the same time be unsatisfied with the job (Meyer et al., 2002). Conversely, McPhee and Townsend (1992) state that job satisfaction and organisational commitment do not necessarily occur simultaneously – it is possible that an employee may exhibit high levels of job satisfaction without having a sense of attachment to, or obligation to remain in, the organisation.

5.4.2 Turnover Intention (Negative Outcome)

5.4.2.1 Turnover Intention and Burnout

There is a continuous growth of competition, restructuring, layoffs, downsizing, technology changes and mergers in an organisation, and this results in an increase of stress levels among employees (Sewandi & Perera, 2016). Such stress results in burnout (Applebaum et al., 2010). According to Pan (2017), burnout is identified as commonly experienced among the new generation of employees and should not be ignored as it may result in serious consequences, such as high turnover intention.

In an effort to explain the relationship between turnover intention and burnout, Lofquist and Dawis (1969) state that increasing levels of job tension or stress result in burnout, which results in exiting an

organisation. According to Demerouti et al. (2001), theoretical frameworks of burnout reveal that burnout is a key mediator of the relationship between chronic job stressors and various attitudinal outcomes, with one of the most important outcomes with serious consequences being turnover intention. Similarly, Pan (2017) states that when employees experience burnout, such employees are unhappy at work and tend to experience a lot of trouble within job roles. This may lead to higher absenteeism and a greater likelihood of weighing up exiting the organisation.

Researchers find that the greater the stress, the higher the turnover intention of employees (Applebaum et al., 2010; Chen et al., 2010; Noor & Maad, 2008; Sheraz et al., 2014). Khan et al. (2014) argues that if organisations desire retaining employees, job stressors need to be reduced, which may cause job stress and burnout, and ultimately lead to employee turnover intention.

According to Du Plooy and Roodt (2010), research findings on the predictive relationship between burnout and turnover intention is not plentiful, and literature regarding the strength of the relationship between the constructs proves to be inconsistent. Nonetheless, a clear link does appear to exist. Therefore, if a person experiences symptom of burnout, the potential of turnover intentions does not lag far behind (Du Plooy & Roodt, 2010).

5.4.2.2 Turnover Intention and Work Engagement

In recent years, turnover emerged as a serious problem in organisations which compete to retain talent and strengthen employee attachment (Gupta & Shaheen, 2017). Research shows that work engagement, the discretionary attachment of one's self to one's role, emerges as a construct with the potential to significantly influence employee turnover intention (Halbesleben & Wheeler, 2008).

According to Saks (2006), work engagement is related to individual attitudes, intentions and behaviours, and can be conceptualised as an antecedent of turnover intention. Engaged employees are observed as so occupied with positive energy that such employees actively and persistently immerse themselves in work, leaving little time and space for negative thoughts (Saks, 2006). As a result, engaged employees are likely to become more attached to the organisation and have reduced inclination to exit (Schaufeli & Bakker, 2004). Saks (2006) states that it is vital for employees to perform work which is engaging so as to deter workplace turnover. De Lange, De Witte, and Notelaers (2008) concur with Saks (2006), stating that

engaged employees willingly commit themselves entirely to work, and experience great difficulty detaching themselves after completing tasks.

Shuck and Reio (2014) explain the relationship between engagement and turnover intention by stating that employees, who experience negative work circumstances, develop a negative spiral of emotions, which fosters the intention to leave an organisation. In order to fully grasp the relationship, each dimension of engagement must be examined in relation to turnover intention. With regards to the cognitive dimension, Shuck and Reo (2014) state that if an employee experiences cognitive disengagement, such employee tends to feel unsafe at work, and will therefore desire to exit the organisation. Similarly, emotional disengagement weakens an employee's sense of belonging within an organisation and decreases the intention to remain in the current organisation (Shuck & Reio, 2014). Finally, behavioural engagement has a negative relationship with turnover intention such as cognitive and emotional engagement, since behaviourally disengaged employees are to withdraw energies physically from the organisation and desire to leave the organisation (Shuck & Reio, 2014).

A number of empirical research studies find that employees with a high level of work engagement are positively associated with the intent to remain within one's current organisation (Ali & Baloch, 2009; Harter, Schmidt, & Hayes 2002; Karatepe, 2013; Saks, 2006; Schaufeli & Bakker, 2004; Van Schalkwyk et al., 2010). Conversely, studies reflect that employees with low levels of work engagement are more likely to have greater intention of considering exiting the organisation, as well as a subsequently greater likelihood of actually exiting (Ali & Baloch, 2009; Karatepe, 2013; Mitchell et al., 2007; Saks, 2006;).

5.4.2.3 Turnover Intention and Workaholism

The modern status quo is that employees work long and sometimes excessive hours. It appears as though the pressures of the global economy and the concomitant increased competition have prompted organisations willing to work hard for the organisations (van Wijhe, Peeters, & Schaufeli, 2011). However, the stress induced from workaholic tendencies is likely to cause a person to consider exiting the job. Against this backdrop, it is important to understand the relationship which exists between workaholism and turnover intentions. Although scholars emphasise workaholism, very little research has been undertaken in the field (Burke & MacDermid, 1999). The available research shows that there is a limited number of studies conducted which investigates the relationship between workaholism and turnover

intention. According to Burke and MacDermid (1999), the opinions, observations and conclusions of workaholism and its relationship to constructs are both varied and conflicting.

In a study conducted by Burke (1999), results indicate that the intention to quit is considerably higher among workaholics. Van Beek et al. (2014) concludes that turnover intentions are seen as a positive consequence of workaholism. Conflicting results appear in a study by Schaufeli et al. (2008) who conclude that workaholics are committed to the organisation, similar to engaged workers, and are therefore unlikely to think about leaving the organisation. It is hoped that the results from this study will contribute towards understanding workaholism, its antecedents, and its outcomes.

5.4.2.4 Turnover Intention and Job Satisfaction

Job satisfaction has played a major role in turnover research (Ding & Lin, 2006), and reflects an influence on turnover intentions. According to Mbah and Ikemefuna (2012), the implication of this is that the extent to which an organisation is able to retain employees depends upon the level of job satisfaction experienced by employees. As such, an increased number of researchers and scholars have begun studying the relation between job satisfaction and turnover intentions (Anwar & Shukur, 2015).

Pienaar, Sieberhagen, and Mostert (2007) find that job satisfaction is the most significant predictor of turnover intention and is significantly and negatively correlated with turnover intention. That is, higher job satisfaction is associated with lower turnover intention. These findings are consistent with numerous other studies (Griffeth & Hom, 1995; Mossholder, Settoon, & Henagan, 2005; Chen et al., 2010; Al-Battat & Som, 2013). A simple explanation, according to Pienaar et al. (2007), is that employees satisfied in the workplace are less likely to consider leaving their jobs. According to Heider (1958), the negative relationship between job satisfaction and turnover intention agrees with the balance theory, encompassing that individuals prefer balance as compared to an imbalanced state, as well as the cognitive dissonance theory of social attitude, that there must be consistency between an individual's attitude and behaviour towards an object, so as to eliminate pressure associated with inconsistency.

However, Anwar and Shukur (2015) state that it is essential that since turnover is a specific perception, it cannot be clarified by general perceptions such as job satisfaction. According to Anwar and Shukur (2015), the link between turnover and job satisfaction can be associated with several factors and variables such as compensation, stress, environment training, and so forth. According to Laschinger (2012), work

conditions which provide support, resources, opportunities to learn and grow, and encourage autonomy, are associated with job satisfaction, and leads to low turnover intentions. Conversely, job-related stress which results in burnout, such as increased workloads, a weak sense of community, perceived lack of equity of fairness, lack of support and resources, and emotional exhaustion, all contribute to decreased job satisfaction and increased turnover intentions (Laschinger, 2012). According to various theorists and studies, the relationship between job satisfaction and turnover intentions is mediated by the extent to which a match exists between an employee's expectations of a job, and the subsequent actual experience on the job (Locke, 1975; Porter & Steers, 1973; Vroom, 1964).

According to Anwar and Shukur (2015), after a literature review, it is concluded that one of the main reasons for increased turnover intention rates in organisations can be attributed to the level of job satisfaction experienced by an employee. Hasin and Omar (2007) conclude that organisations need to start monitoring both the extrinsic and intrinsic sources of job satisfaction that are available to employees, as these activities assist in maintaining and increasing job satisfaction and commitment to the organisation, and consequently reducing turnover intention.

5.5 CHAPTER SUMMARY

Chapter 5 addresses the fourth literature aim, namely, to conceptualise the positive and negative outcomes (organisational commitment and turnover intentions). Firstly, the conceptual foundations of organisational commitment and turnover intentions were discussed. This followed an exploration of the relationship between the respective outcomes and occupational wellbeing. Finally, the relationship dynamics between the positive and negative outcomes, with each of the employee wellbeing attributes (burnout, work engagement, workaholism and job satisfaction) was discussed.

Chapter 6 addresses the final literature research aim, namely, research aim 4. In considering the theoretical relationship identified among the employee wellbeing attributes, psychosocial antecedent variables, and positive and negative outcome variables, research aim 4 relates to determining what theoretical models of occupational wellbeing types, their associated psychosocial antecedents, and positive and negative organisational outcomes look like.

CHAPTER 6
INTEGRATION – OCCUPATIONAL WELLBEING TYPES FOR THE HEALTHCARE INDUSTRY OF SOUTH AFRICA

This chapter addresses literature research aim 4, which is related to the conclusion of the literature review. Literature research aim 4 pertains to the contextual integration of the employee wellbeing attributes, the psychosocial antecedent variables and the positive and negative outcome variables with a view understanding what theoretical models of occupational wellbeing look like.

6.1 OCCUPATIONAL WELLBEING IN THE HEALTHCARE INDUSTRY OF SOUTH AFRICA: THEORETICAL LENS

The wellbeing of healthcare workers is important for the affective functioning of health systems and the provision of healthcare services (Selamu et al., 2017). From the discussion in chapter 2, it appears that healthcare professionals are prone to high levels of occupational stress (Ledikwe et al., 2018), and this can affect the wellbeing of healthcare workers adversely, leading to mental health problems and the experience of burnout (Selamu et al., 2017). According to Ledikwe et al. (2018) in Sub-Saharan Africa, healthcare systems continue to face high demands for services and insufficient resources, which results in extremely tense work environments for healthcare workers and leads to these workers ultimately experiencing chronic stress. Thus, protecting the occupational health of healthcare workers is critical to having an adequate workforce of trained and healthy personnel (WHO, 2005).

Currently, South Africa has no occupational health guidelines for the protection of healthcare workers (Tudor, Van der Walt, Hill, & Farley, 2013). Instead, according to Tudor (2013), South African workers rely on the Occupational Health and Safety Act No. 85 of 1993, which illustrate general guidelines for the health of all workers in agreement with the Occupational Safety and Health Convention of the International Labour Organisation (ILO). Against such a background, the implication of having an occupational wellness model is realised as having the potential to play an instrumental role in assisting the industry in having a better understanding of the risks posed to the workers wellbeing, and, the constructs that could potentially aid in enhancing workers affective wellbeing.

Danna and Griffin (1999) identified two interrelated sets of consequences of wellbeing in the workplace: direct implications for individuals (i.e. physical, psychological and behavioural consequences) and direct implications for organisations (i.e. health insurance costs, productivity, and absenteeism). The most important physical consequence at the individual level is related to the consequences at the organisational level (De Simone, 2014a). As a result, the benefits of an occupational wellness model are further realised as playing a vital role in assisting the industry to understand their workers wellness needs, and thereby reducing organisational associated challenges and costs.

Workplace wellness interventions are employer-provided efforts that are undertaken to enhance their awareness, change their behaviour and create environments that support good health practices for their staff (Aldana, 2001). According to Brand et al. (2017), interventions to improve the health and wellbeing of healthcare staff, have primarily focused on supporting or improving individual coping skills. Whilst personal coping skills mediate the effects of stressors at work on health and wellbeing, research points to the benefits of understanding the wellbeing of healthcare workers at a system level (including organisational, environmental, social, and physical aspects), the knowledge of which can be used to create sustainable and affective health and wellbeing interventions (Brand et al., 2017), as is the intention with this study. Therefore, through conducting an in-depth study and exploring and discussing the challenges faced by healthcare workers, and by thereafter investigating employee wellbeing attributes, psychosocial antecedent variables, and positive and negative outcomes impacting on an employee's wellbeing, the researcher has been able to provide an understanding of the wellbeing of healthcare workers at the system level, and it is envisioned that this knowledge could potentially now be used to inform affective wellbeing practices for the industry. Evidence suggests that workplace wellness interventions can have numerous benefits, including lower healthcare costs, reduced absenteeism, and increased productivity (Baicker, Cutler, & Song, 2010; Kolbe-Alexander et al., 2012), and are therefore beneficial from both the employer and employee perspective (Ledikwe et al., 2017).

6.2 OCCUPATIONAL WELLBEING TYPES FOR THE HEALTHCARE INDUSTRY OF SOUTH AFRICA: AN OVERVIEW OF THE LITERATURE REVIEW

Whilst occupational wellbeing has received a great deal of attention in the literature, no studies, to the knowledge of the researcher, have identified occupational wellbeing types for the healthcare industry of South Africa, and further set out to determine the nomological net for each of the identified occupational

types based on the relationship between the occupational wellbeing types, psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) and outcome variables (organisational commitment and turnover intention). As discussed in Chapter 3, the current study used the circumplex model of occupational wellbeing (Bakker & Oerlemans, 2011), which represents four wellbeing indicators (burnout, work engagement, workaholism and job satisfaction) as states of pleasantness and activation (Russell, 1990, 2003) to describe the nature of healthcare workers wellbeing. Through the use of the circumplex model, the study aims to identify wellbeing types that cluster as a result of variables that can be plotted on the circumplex model of wellbeing. As identified in the literature, affective wellbeing is considered to be the most important component of psychological wellbeing (Warr, 1990), due to its proven relationship with many workplace constructs such as job satisfaction, burnout and occupational stress (Hofmann et al., 2014).

Bakker and Oerlemans (2011) developed the theoretical circumplex model within the context of the general circumplex model of affect (Russell, 1980). According to Mäkikangas et al. (2015), the circumplex model (Bakker & Oerlemans, 2011) through its integration of the four work-related wellbeing indicators (i.e. burnout, work engagement, workaholism and job satisfaction), can be used to describe the multifaceted nature of employee wellbeing (Bakker & Oerlemans, 2011). In the occupational context, the combination of high activation and high pleasure has been referred to as work engagement, while burnout represents its counterpart (deactivation and displeasure); the combination of pleasure and deactivation has been proposed to represent job satisfaction, while the state combining high arousal and displeasure, is characteristic of workaholism (Sverke, 2015). Over the years, the circumplex model has been applied to research studies to identify occupational wellbeing types, with the aim of informing wellness practices and improving employee wellbeing. Empirical studies by van Beek (2011); Salanova et al. (2014); Mäkikangas et al. (2015); Dijkhuizen et al. (2016); and Hakanen et al. (2017) have all provided evidence of the usefulness of the circumplex model in this regard. A notable advantage of the circumplex model is that the model also looks at the interaction and holistic interplay that exists between the variables, rather than only taking into consideration the sum of different variables. In this regard, the model provides an accurate picture of the multi-dimensional nature of occupational wellbeing, and as a consequence, employee wellbeing.

Against the above background, it was determined that the circumplex model of occupational wellbeing (Bakker & Oerlemans, 2011) provides a concrete framework for identifying occupational wellbeing types

in the healthcare industry of South Africa. The occupational wellbeing types are based on the constructs from the circumplex model (i.e. burnout, work engagement, workaholism and job satisfaction, and are referred to as employee wellbeing attributes in this study). In identifying occupational wellbeing types, it was important for the researcher to identify variables that could potentially impact on these types and further cause the wellbeing types to differ. Literature had shown that the employee wellbeing attributes investigated in this study are influenced by the effects of variables such as age, job demand-resources and work-related sense of coherence (Work-SoC) (Mäkikangas, Kinnunen, Feldt, & Schaufeli, 2016; Van der Westhuizen & Ramasodi, 2016), however, there is a paucity of research into the association of these variables, especially with regard to the variables of age and Work-SoC. As such, this research focused on studying the relationship of these variables with the circumplex model. This study was further interested in understanding the implications of associations with positive (organisational commitment) and negative (turnover intention) outcomes of the occupational wellbeing types, and how the occupational wellbeing types could differ with regard to these variables. These specific outcome variables were included in this study since Page and Vella-Brodrick (2009) argued that the indication of organisational health, as determined by employee wellbeing, can be noted from employees' decision to either remain in an organisation (organisational commitment) or their decision to leave (turnover intention). Coetzee et al. (2015) highlighted that determining how to keep employees committed to an organisation, and retain their valuable skills, has become a top priority for organisations; with healthcare institutions being at the forefront of this struggle (Mayosi & Bentar, 2014; Selamu et al., 2017).

The importance of creating and fostering a positive working environment, one where the employees' wellbeing is of paramount importance, has been well documented in the literature (Bakker & Oerlemans, 2011; Keyes, 2005; Warr, 1990, 2003). Furthermore, the importance of occupational wellbeing for the healthcare industry has also been highlighted extensively in the literature (as discussed in chapter 2) (Armstrong & Rispel, 2015; Khamisa et al., 2016; Mayosi & Bentar, 2014; Scheepers et al., 2015; Selamu et al., 2017). According to Xanthopoulou et al. (2012) an employee who experiences high levels of wellbeing is not just a person who has a positive disposition towards their work, rather, they are likely to experience frequent, momentary, positive psychological experiences while at work on a daily basis. As a result, it is anticipated that this study will create valuable knowledge that could be used to inform affective wellbeing practices, within the context of the South African healthcare industry.

The occupational wellbeing types that this study aimed to identify and evaluate is unique in that it aims to offer a deeper and more complete picture of occupational wellbeing, and consequently the individual

constellations of the employee wellbeing attributes of burnout, work engagement, workaholism and job satisfaction, and how they relate to the psychosocial antecedent variables, and the positive and negative outcomes. The employee wellbeing attributes of workaholism and burnout have shown to have primarily adverse outcomes (Maslach et al., 2001), whilst work engagement, and job satisfaction have shown to have primarily positive outcomes (Bakker & Demerouti, 2008).

The central hypothesis of this research is that this study may prove useful in empirically testing the circumplex model of affective wellbeing. This is achieved by identifying occupational wellbeing types that cluster as a result of variables that can be plotted on the circumplex model of wellbeing (burnout work engagement, workaholism and job satisfaction) and determining their relationships with psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) as well as with positive and negative outcome variables (organisational commitment and turnover intention). The culmination of knowledge derived from the relationship between the occupational wellbeing types, psychosocial antecedent variables and outcome variables of the subjects serves the purpose of determining the nomological net for each of the identified occupational types.

Figure 6.1 below depicts the relationship between the variables on a theoretical level.

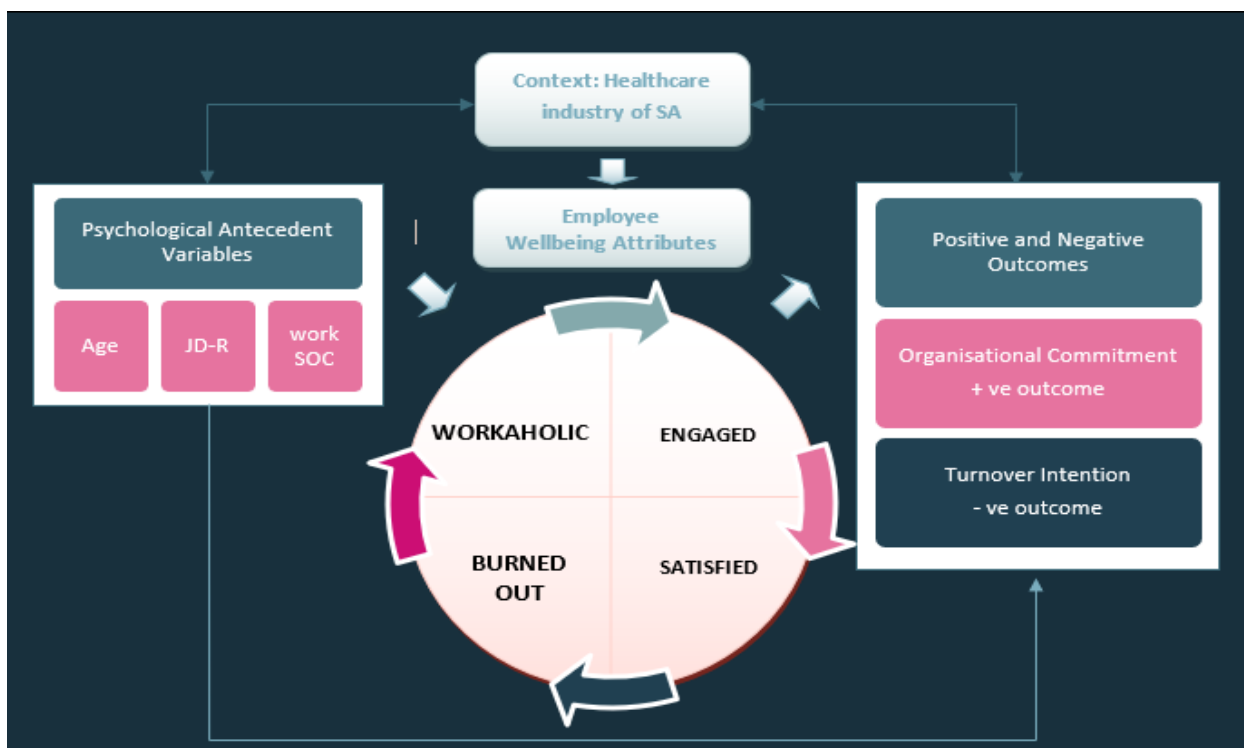


Figure 6.1 Hypothesised theoretical relationship between variables investigated in this study.

Figure 6.1 depicted above, provides insights of how occupational wellbeing types may be expected to differ in terms of their relationship to the psychosocial antecedent variables, and the positive and negative outcome variables, within the healthcare industry of South Africa

A discussion on the hypothesised theoretical relationship between the variables follows below, beginning with the theoretical relationship between the employee wellbeing attributes, which forms the core of the theoretical occupational wellness model.

6.2.1 Hypothetical Theoretical Relationship Between the Employee Wellbeing Attributes

In this study, employee wellbeing attributes, namely burnout, work engagement, job satisfaction and workaholism have been conceptualised as constructs that combine to form occupational wellbeing types. Bakker and Oerlemans (2011) mapped the employee wellbeing attribute (burnout, work engagement, workaholism and job satisfaction) using indicators of high and low hedonic wellbeing at work on to the affect circumplex model (Russell, 1980; 2003; Warr, 1990; Warr et al., 2014; Watson & Tellegen, 1985). This study hypothesises that work engagement and job satisfaction can be viewed as positive forms of occupational wellbeing, and workaholism and burnout being referred to as negative forms of occupational wellbeing, as per Bakker and Oerlemans (2011) and as depicted in Figure 6.1.

Positive forms of Occupational Wellbeing:

- **Work engagement** is positioned in the upper right quadrant of the model, as it resembles high levels of activation and pleasure (Bakker & Oerlemans, 2011; Sverke, 2015). Simply put, this quadrant captures how employees experience their work: as stimulating and energetic and something which they really want to devote their time and effort (vigour); as a significant and meaningful pursuit (dedication); and as engrossing and interesting (absorption) (Bakker et al., 2008; Bakker & Oerlemans, 2011).

Engaged employees are seen to have a sense of energetic and affective connection with their work activities and view themselves as being able to deal well with the demands of their job (Leiter & Maslach, 2001). Employees that are engaged and thriving, are generally more agile and resilient, and as a result, are less impacted or thrown of course when they are exposed to major organisational changes or disruptions to their personal lives (Gallup, 2013), as a result, they report fewer health problems, and consequently report higher levels of overall wellbeing at work (Gallup, 2013). Numerous studies have

indicated that work engagement is associated with positive outcomes for both employees and their organisations (Del Libano et al., 2012; Schaufeli & Bakker, 2004; Sonnentag, 2003), whilst Shuck and Reio (2014) reported that poor engagement could be detrimental to organisations due to the ensuing decrease in employee wellbeing and subsequent productivity. Literature has provided evidence for the positive relationship between engagement and wellbeing. Brunetto et al. (2012) found that work engagement is associated with high levels of employee wellbeing, whilst Gallup (2013) reported that employees that are productive and engaged at work, tend to assess their overall lives in a higher light as opposed to employees that were not engaged.

Job satisfaction is a form of affect and is positioned in the right lower quadrant as it reflects a high level of pleasure but a lower level of activation (Bakker & Oerelemans, 2011; Sverke, 2015). Job satisfaction is perceived as a positive attitude and behaviour at workplaces (Vroom, 1964), and refers to an employee's feelings of satisfaction on the job, which in turn acts as a motivating factor to work (Munir & Rahman, 2016). Authors Grenber, Semmer, and Elfering (2005) highlighted that whilst employees may be satisfied with their jobs and may experience pleasure, it is also possible that they may have limited energy or aspirations.

Job satisfaction has been reported to have numerous advantages for an organisation, such as the minimisation of turnover, increased commitment, and improved organisational performance (Rane, 2011; Tabassum, Khan, Sherani, & Khan, 2016). Furthermore, Maxwell (n.d) reports that it is in an organisation's best economic interest to promote satisfaction, since satisfied workers are generally able to deliver an increased level of performance. In contrast, an employee's job dissatisfaction at work effects organisations in negative ways and can result in feelings such as stress (Munir & Rahman, 2016). The positive relationship between job satisfaction and occupational wellbeing has been documented in the literature (Judge et al., 2001; Warr, 2009). In the occupational context, wellbeing translates into individuals' establishing positive relationships with the people around them, occupational acceptance, personal development and meeting life and occupational needs – all of which contributes greatly to whether or not a person will experience job satisfaction (İşgör & Haspolat, 2016). Research by Wright and Bonnett (2007) suggests that wellbeing and job satisfaction interrelate to predict whether an employee will leave or stay in their current job.

Whilst both work engagement and job satisfaction are positive forms of occupational wellbeing, it is important to note that they are different concepts (Dijkhuizen et al., 2016). Engagement combines work pleasure, dedication with high activation (vigour and absorption), whilst job satisfaction is seen as a more passive form of wellbeing (Dijkhuizen et al., 2016).

Negative forms of Occupational Wellbeing:

- **Workaholism** is positioned in the upper left quadrant of the model as it reflects low(er) levels of pleasure and a high level of activation regarding work (Bakker & Oerlemans, 2011; Sverke, 2015).

Simply put, workaholism is perceived to be a feeling of compulsion to work, having persistent thoughts about work when not working, and working beyond what is reasonably expected of the worker (Clark, Michel, Zhdanova, Pui, & Baltes, 2016). A central debate in workaholism literature, one which continues in present day, is whether workaholism is a positive or negative phenomenon. Some researchers argue that workaholism is associated with eustress (pleasant stress) (Brauch, 2011) and positive outcomes such as job satisfaction and performance, extra work efforts (Griffiths, 2011; Ng, Sorensen, & Feldman, 2007), whilst the majority of researchers believe that such positive outcomes will only be for the short term, as the negative consequences associated with workaholism such as extreme stress, impaired health and work-life conflicts will eventually prevail (Griffiths, 2011; Ng et al., 2007; Schaufeli et al., 2009). In keeping with the negative view of workaholism, as the concept is viewed in this study, previous studies have reported that workaholism is negatively related to wellbeing (Andreassen, Ursin, & Eriksen, 2007; Burke, 2000; 2008; Robinson, 1998; Schaufeli et al., 2006; Schaufeli et al., 2009). Schaufeli, Bakker, van der Heijden, and Prins (2009) reported that a possible explanation for this is due to the fact that working excessively hard in a compulsive way is likely to result in a substantial amount of stress which is conflicting with experiencing feelings of health and wellbeing.

- **Burnout** is positioned on the lower left quadrant of the model as it reflects low levels of pleasure and activation (Bakker & Oerlemans, 2011; Sverke, 2015).

Burnout is theorised to affect worker wellbeing as a result of a depletion of the burned-out employees affective/psychological, physical or behavioural state (Lizano, 2015). Simply put, burnout is thought to arise from a prolonged disparity between what an employee gives and receives at work (Maslach & Leiter, 1997). The concept is characterised by overwhelming exhaustion, negative attitudes, or a lack of

commitment with one's job and dissatisfaction with job performance (Salvagioni et al., 2017). Literature has identified that burnout is typically associated with negative outcomes in terms of an employee's wellbeing (Burke, 2010; Leiter & Maslach, 2001), and results in negative consequences for the organisation such as employee sickness and employees being absent from work (Salvagioni et al., 2017).

According to Liebenberg, Coetzee, Conradie, and Coetzee (2018), the burnout of South African healthcare staff negatively influences their recruitment and retention, effectiveness and efficiency of health systems and, inevitably, patient care. Brotheridge and Grandey (2002) reported that burnout has been often linked with health problems and organisational consequences that includes staff turnover, increased intention to leave, negative work attitudes and reduced level of performance. When employees have a high level of wellbeing, this enables them to rate contradictory or stressful situations in a positive way, and as a result, they tend to believe that they can control these situations, and use active coping strategies, such as problem-solving and/or cognitive reappraisal to help buffer the negative effects (Losiak, 2002).

Firstly, it is expected that work engagement and job satisfaction are positively associated, and this study hypothesises this as the first occupational wellbeing type combination. This type combination is in line with studies by Hakanen and Schaufeli (2012a), Hakanen and Schaufeli (2012b), and Hayes and Weathington (2007) who stated that work engagement is likely to predict a high level of satisfaction.

It is further expected that work engagement and workaholism are positively associated and this study hypothesise this as the second occupational wellbeing type combination. According to Inananen et al. (2014), engaged employees are enthusiastic, and energetic and involved, and may be seen as reasonably committed to their work - they put all their physical, emotional and mental energies into their work, and as a result are capable of optimum performance and experience positive emotion. Consequently, these employees tend to work long hours, however, they feel pleasure as a result and are not addicted to their work (Innanen et al., 2014).

Next, the researcher expected that workaholism and job satisfaction are negatively associated, and this has been hypothesised as the third occupational wellbeing type. In the circumplex, opposites can be found between the constructs of workaholism and job satisfaction (Taris et al., 2009). This is explained by Russell (1980, 2003), who stated that at a certain moment, a person cannot feel like a workaholic, and experience emotions such as agitation and irritation, and at the same time, feel satisfied with their work.

Lastly, a negative relationship is also expected between work engagement and burnout. The constructs of work engagement and burnout are located as opposites on the circumplex model. The dimension of burnout reflects employees who are exhausted and stressed (Bakker, Demerouti, & Verbeke, 2004), and it is therefore not plausible to expect these employees to at the same time, be fully engaged and present in their work. Gonzálz-Roma et al. (2006) confirmed the negative relationship between work engagement and burnout, in a previous study.

The above mentioned and discussed hypothesised occupational wellbeing type combinations, have to date, not been addressed in the healthcare industry in the South African context. Previous studies have investigated occupational wellbeing types; however, these have all been international studies. As previously discussed in Chapter 3, Van Beek et al. (2011) identified four types of occupational wellbeing (workaholics, engaged workers, engaged workaholics and non-workaholic/non-engaged) among Dutch employees. Inananen et al. (2014) set out to determine longitudinal profiles of burnout, engagement, and workaholism that could be identified in a sample of highly educated Finnish employees. The authors concluded two types of occupational wellbeing: engaged and exhausted-workaholic. Salanova et al., (2014) established a typology of employee wellbeing based on four different types (relaxed, work engaged or enthusiastic, workaholic or tense and burned-out or fatigued) among a sample of full-time Spanish workers from different occupational sectors. A person-orientated analysis by Mäkikangas et al. (2015) revealed four occupational wellbeing types: Engaged, Burned-out, Ordinary and Bored-out, amongst a sample of Finnish employees. Finally, Dijkhuizen et al. (2016) investigated the hypothesised occupational wellbeing type combinations as investigated in this study; however, this was done among a sample of Dutch entrepreneurs. These authors found that Dutch entrepreneurs could be classified as high on work engagement, relatively high on exhaustion, job satisfaction and working compulsively. As a result, the researcher therefore found it necessary to investigate the hypothesised occupational wellbeing type combinations discussed above and determine if they are applicable for the South Africa context, with particular reference to the healthcare industry.

The hypothesised relationship between each of the psychosocial antecedent variables and the occupational wellbeing type combinations is discussed below.

6.2.2 Hypothetical Relationship Between the Psychosocial Antecedent Variables and the Occupational Wellbeing Type Combinations

Research on the relationship between age and each of the employee wellbeing attributes has shown contradictory findings. Age is said to have an affect on the wellbeing levels of employees (Hayley, 2012) and the aging process has been conceptualised as a multidimensional process, which comprises of changes in functioning over time, which involve changes to the psychological, physiological or social processes. With regard to burnout, some studies found burnout to be more prevalent amongst older employees (Koivula & Laippala, 2000; Ilhan et al., 2008), whilst other studies found burnout to be more dominant amongst younger employees (Ahola et al., 2008; Hayley et al., 2013; Rothmann & Barkhuizen, 2008). Similarly, contradictory findings were found on studies that examined the relationship between age and work engagement – Kim and Kang (2016), James et al. (2011) and Pitt-Catasoupes, Matz-Costa, and Besen (2009) reported that employees' level of engagement is higher as employees get older, whilst Avery et al. (2007) and Billet et al. (2011) reported that the converse is true. Whilst limited studies have investigated the relationship between age and workaholism, all studies have concluded that workaholism affects younger employees more (Andreassen et al., 2016; Clark et al., 2016; Sussman, 2012). Lastly, studies on age and job satisfaction have shown that job satisfaction increases with age (Boumans et al., 2011; Carrillo-Garcia et al., 2013; Kumar & Giri, 2009; Ng & Feldman, 2010).

The theoretical relationship between variables therefore hypothesises that older and younger employees may display significant differences in relation to the individual employee wellbeing attributes of burnout, work engagement, workaholism and job satisfaction and by implication, will also display significant differences between the different occupational wellbeing type combinations. It is however not clear from previous research what the direction of the differences might be. Differences are nonetheless expected.

Job demands and resources focus on negative (demands) and positive (resources) of wellbeing (Bakker & Demerouti, 2007), with job demands referring to organisational aspects that require sustained physical or mental effort, and job resources as physical, psychological, social, or organisational aspects of the job that are either or: functional in achieving work goals; reduce job demands and the associated physiological and psychological cost; stimulate personal growth, learning, and development (Bakker & Demerouti, 2001). Job demands and job resources are typically defined on the basis of employee perceptions (Grawitch, Ballard, & Erb., 2017). According to Grawitch et al. (2017) employees who perceive to be overwhelmed by job demands will likely experience burnout and workaholism, whilst employees who

perceive to have adequate job resources to cope with workplace stressors (i.e. job demands), will likely experience work engagement and job satisfaction (Grawitch et al., 2017).

In line with literature, this study hypothesises that the occupational wellbeing type combinations will therefore differ with regard to employees perceived job demands and resources. Job demands are hypothesised to be positively related to burned-out and workaholic healthcare employees and negatively related to engaged and satisfied healthcare employees. Conversely, job resources are hypothesised to be negatively related to burned-out and workaholic healthcare employees but positively related to engaged and satisfied healthcare employees.

Work-related sense of coherence is a valuable coping tool (Vogt et al., 2013), which acts as a moderator to the work-health relationship, by reducing the potential negative effects of work stressors (Ebzer, Becker, & Antony, 2011). Due to the fact that Work-SoC is a relatively new concept, there are limited studies that have investigated its relationship to the employee wellbeing attributes. Existing literature confirmed that Work-SoC is negatively related to burnout (Vogt et al., 2013), and positively related to work engagement (Vogt et al., 2013). Whilst there have been no studies to date that have examined the relationship between Work-SoC and workaholism and Work-SoC and job satisfaction, Kalimo and Vuori (1990) and Reynold and Greenfield (1991) stated that SoC can act as a coping resource to workaholics; and Coetzee and Rothmann (2009), Judge et al. (1998), and Strümpfer and De Bruin (2009) all concluded that SoC was positively related to job satisfaction. As a result, it can be expected that employees with a strong level of Work-SoC will experience work engagement and job satisfaction (positive forms of wellbeing), whilst employees' with a low level of Work-SoC will experience burnout and workaholism (negative forms of wellbeing). This study therefore hypothesises that occupational wellbeing type combinations will differ with regards to an employee's level of Work-SoC.

The positive and negative outcomes, namely, organisational commitment and turnover intention has been conceptualised as being the occurring result of the identified occupational wellbeing types, and it is expected that each of the occupational wellbeing types will differ as a result of their relationship to the variables. The hypothesised relationship between each of the outcome variables and the occupational wellbeing type combinations is discussed below.

6.2.3 Hypothetical Relationship Between the Positive and Negative Outcome Variables and the Occupational Wellbeing Type Combinations

The relationship between organisational commitment and occupational wellbeing is seen as an important relationship, as employee's commitment to their organisation, could indicate their wellbeing (Meyer et al., 2002). Previous research on the wellbeing indicators investigated in this study indicate that employees with high levels of burnout will likely be low on organisational commitment (Kalliath et al., 1998); whilst employees with high engagement levels (Rothmann & Jordaan, 2006), workaholics (Rakshanimehr & Jenaabadi, 2015) and satisfied employees (Muller et al., 2014) are likely to have high commitment to their organisations. As a result, this study hypothesises that occupational wellbeing type combinations will differ with regard to the positive outcome of organisational commitment.

Whilst the relationship between turnover and wellbeing has not been widely researched (Allen et al., 2010), it is undeniable that organisational success is attributed to its employees (Xu et al., 2016). It is therefore important to understand factors that could lead to turnover intention. Previous studies have shown that employees with high levels of burnout are likely to experience turnover intention (Pan, 2017), whilst engaged employees (Saks, 2006), workaholics (Schaufeli et al., 2008; van Beek, 2014) and satisfied employees (Pienaar et al., 2007), will likely choose to remain in their organisations, and further display commitment to their organisation. This study therefore hypothesises that the occupational wellbeing type combinations are expected to differ in terms of the negative outcome of turnover intention.

Based on the literature review, and the above discussion of the hypothetical relationship between the variables, the following research hypotheses have been proposed, as shown in table 6.1 below:

Table 6.1

Research Hypotheses

Research aim	Research hypothesis
<p>Research aim 1: To conduct an empirical investigation that explores the direction and magnitude of the statistical inter-correlations between the employee wellbeing attributes (burnout, work engagement, workaholism, job satisfaction), and determine which type combinations of occupational wellbeing can be distinguished based on the measurements of burnout, work engagement, workaholism and job satisfaction.</p>	<p>H1: Four occupational wellbeing types will emerge parallel with the four quadrants of the circumplex model</p>
<p>Research aim 2: To determine if the occupational wellbeing type combinations differ with regard to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence).</p>	<p>H2a: The occupational wellbeing type combinations differ with regard to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence).</p> <p>H2b: The psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) significantly predict the occupational wellbeing types.</p>
<p>Research aim 3: To determine whether the occupational wellbeing type combinations positively and significantly predict the positive and negative outcome variables (organisational commitment and turnover intention).</p>	<p>H3a: The occupational wellbeing type combinations positively and significantly predict the positive and negative outcome variables (organisational commitment and turnover intention).</p> <p>H3b: The occupational wellbeing type combinations differ significantly related to organisational commitment.</p> <p>H3c: The occupational wellbeing type combinations differ significantly related to turnover intention.</p>
<p>Research aim 4: To determine if the occupational wellbeing types moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and the positive and negative outcome variables (organisational commitment and turnover intention, in order to draw conclusions regarding the nomological net of the identified occupational wellbeing types).</p>	<p>H4: The occupational wellbeing types moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and the positive and negative outcome variables (organisational commitment and turnover intention and conclusions can be drawn regarding the nomological net of the occupational wellbeing types).</p>

6.3 CHAPTER SUMMARY

This chapter addressed research aim 4 of the literature review; namely to construct a theoretically integrated occupational wellness model that could be used to inform affective wellbeing practices in the healthcare industry in South Africa. This chapter therefore serves as the conclusion to the literature review.

The literature research aims, 1,2,3 and 4 were accordingly achieved:

Research aim 1: To determine how occupational wellbeing and its attributes of work engagement, job satisfaction, burnout and workaholism are conceptualised in the literature review, and to further establish which type combinations of these constructs could be determined based on the circumplex model of affective employee wellbeing.

Research aim 2: To determine to which degree occupational wellbeing types could be expected to differ with regard to psychosocial antecedents (age, job demands, job resources, and work-related sense of coherence).

Research aim 3: To determine to which degree occupational wellbeing types could be expected to differ with regard to positive and negative outcomes of wellbeing (organisational commitment and turnover intention).

Research aim 4: To determine what theoretical models of occupational wellbeing types, their associated psychosocial antecedents, and positive and negative organisational outcomes look like.

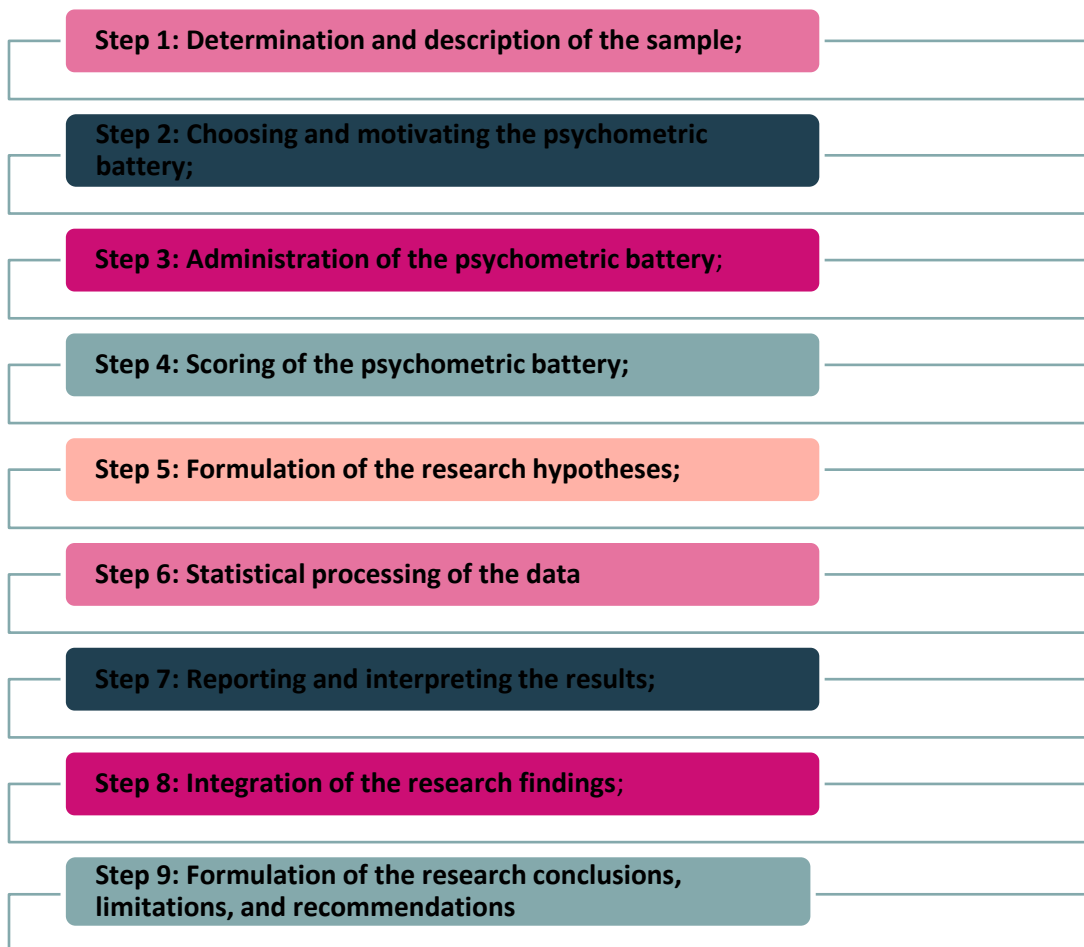
In Chapter 7, the empirical investigation that was conducted is discussed with the specific aim of formulating the methodology that were adopted.

CHAPTER 7

EMPIRICAL STUDY

Chapter 7 demonstrates the empirical investigation that was undertaken with the purpose of defining and describing the statistical strategies that will attain the empirical aims of the study. The measuring instruments are reviewed and the choice of each will be justified, followed by an explanation of the data gathering and statistical processing methods. Thereafter, the formulation of the research hypotheses will be indicated, and the chapter will close with a summary.

The empirical research consists of nine steps as indicated below:



Steps one to six are addressed in this chapter, and steps seven to nine are addressed in Chapters 8 and 9.

7.1 DETERMINATION AND DESCRIPTION OF THE SAMPLE

A population is seen as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications (Polit & Hungler, 1999). A sample, on the other hand, is a small percentage of a population that is chosen for the purpose of observation and analysis (Hussain, 2011). According to Tredoux and Durrheim (2013), samples should be selected from populations in such a way that the researcher is able to maximise the likelihood that the sample represents the population as much as possible. Terre Blanche et al. (2006) state that there are two key sampling methods, namely; probability and non-probability sampling. With probability sampling, every element in the target population is afforded an equal chance of being selected for the sample (Cohen et al., 2013; Terre Blanche et al., 2006), however, with non-probability sampling, the elements in the population are selected according to systematic randomness. As a result, the probability of an element being chosen for the sample is unknown (Cohen et al., 2013; Terre Blanche et al., 2006)

Non-probability samples are typically used when there are boundaries in place preventing probability sampling methods from being used, when there are no available sampling frames, the cost of probability sampling is high and there are time constraints to consider (Tredoux & Durrheim, 2013). This study further used a convenience sampling approach. According to Etikan, Musa, and Alkassim (2016), this sampling approach includes those from the target population that match with certain conditions, including; accessibility, geographical proximity, availability, and the willingness to participate in the study. Elfil and Negida (2017) state that convenience sampling is generally the most relevant and most used approach to sampling in research. The approach is appealing as it is quick, generally cheap to administer, and convenient (Etikan et al., 2016; Elfil & Ngeda, 2017). A popular noted disadvantage of the approach is that it is generally biased, and researchers are therefore cautioned not to interpret results as being representative of the population (Etikan et al., 2016).

In the current study, the total population consisted of 1680 healthcare workers employed in the healthcare industry across the Kwa-Zulu Natal region in South Africa. Initially, (n = 1680) were targeted, however, only a total of 461 usable questionnaires were returned (n = 461). Thus, a response rate of 27% was achieved. According to Baker (1994), a sample size of 10% is an adequate representation of the population.

The profile of the sample is described according to the following socio-demographic variables: gender, race, age, education, occupation and tenure in the organisation. The decision to include these categories of socio-demographic variables was based on the literature review’s exploration of the variables that influence the constructs of the employee wellbeing attributes, psychosocial antecedent variables and positive and negative outcomes.

7.1.1 Distribution of Gender Groups in the Sample

Table 7.1 and Figure 7.1 illustrate the distribution of gender groups in the sample. Male participants comprise 26.7% of the sample and female participants comprise 73.3% of the sample. (n = 461).

Table 7.1.

Gender Distribution in the sample (n= 461)

Gender	Frequency	Percentage	Cumulative Percentage
Males	123	26.7	26.7
Females	338	73.3	73.3
Total	461	100.0	

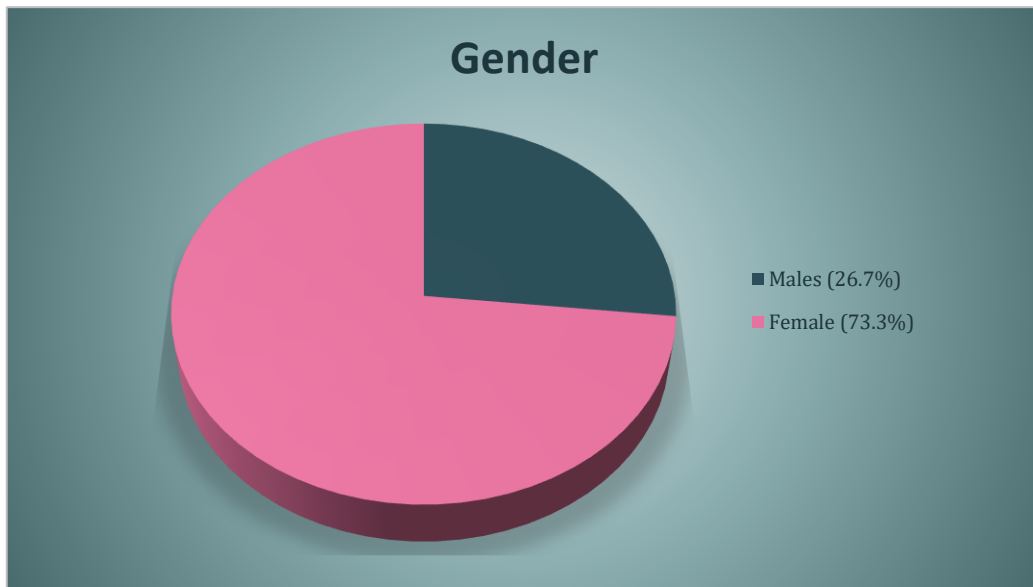


Figure 7.1: Sample distribution by gender (n = 461)

7.1.2 Distribution of Race Groups in the Sample

Table 7.2 and Figure 7.2 depict the racial distribution in the sample. Black Africans comprised 52.5%, Indians/Asians comprise 32.3%, Whites comprised 10.6%, and Coloureds comprised 4.6% of the total

sample of research participants (n = 461). The latter frequencies indicated that the Black African racial group comprises the majority of the sample (52.5%). Overall, participants from ethnic origins (Africans, Coloured and Indians/Asians; 89.4%) were predominant in the sample.

Table 7.2

Race Distribution in the Sample (n = 461)

Race	Frequency	Percentage	Cumulative Percentage
Black African	242	52.5	52.5
Indians/Asians	149	32.3	32.3
White	49	10.6	10.6
Coloured	21	4.6	4.6
Total	461	100.0	

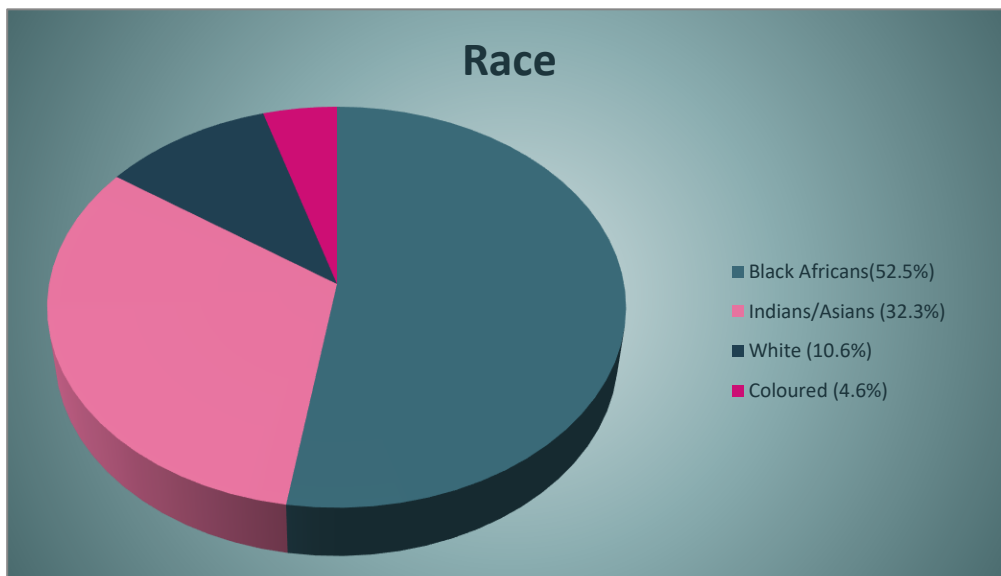


Figure 7.2: Sample distribution by race (n = 461)

7.1.3 Distribution of Age Groups in the Sample

Table 7.3 and Figure 7.3 illustrate the distribution of the age groups in the sample. The ages of the participants were grouped in categories, ranging from 18 years to 65 years of age. The frequencies of the age groups revealed that the 18- to 30-year old age group (24.1%) and 31- to 45-year old age group (60.7%) were in the majority of the sample.

Table 7.3

Age Distribution in the Sample (n = 461)

Age	Frequency	Percentage	Cumulative Percentage
18-30 years	112	24.1	24.1
31-45 years	280	60.7	60.7
46-64 years	70	15.2	60.7
65 years and older	0	0	0
Total	461	100.0	

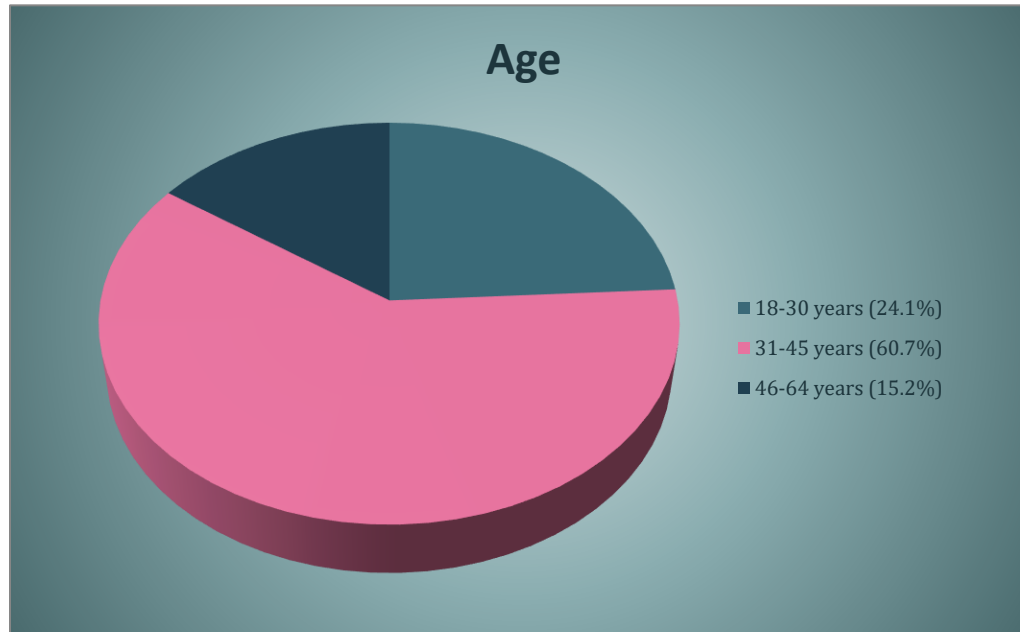


Figure 7.3: Sample distribution by age (n= 461)

7.1.4 Distribution of the Education Qualifications in the Sample

Table 7.4 and Figure 7.4 indicate the distribution of the educational qualification of the sample. The distribution was as follows: 8.9% of the sample had attained Grade 12 (matric); 14.8% had a post-matric certificate; 64.9% had a degree or diploma; and 10.4% had a post-graduate degree. Overall, employees with degrees or diplomas and post-matric certificate level qualifications (75.3%) were in the majority in the sample.

Table 7.4

Educational Qualification Distribution in the Sample (n=461)

Educational qualification	Frequency	Percentage	Cumulative Percentage
Postgraduate Degree	48	10.4	10.4
Degree or Diploma	299	64.9	64.9
Post Matric Certificate	68	14.8	14.8
Grade 12	41	8.9	8.9
Other (Grade 11)	5	1.1	1.1
Total	461	100.0	100.0

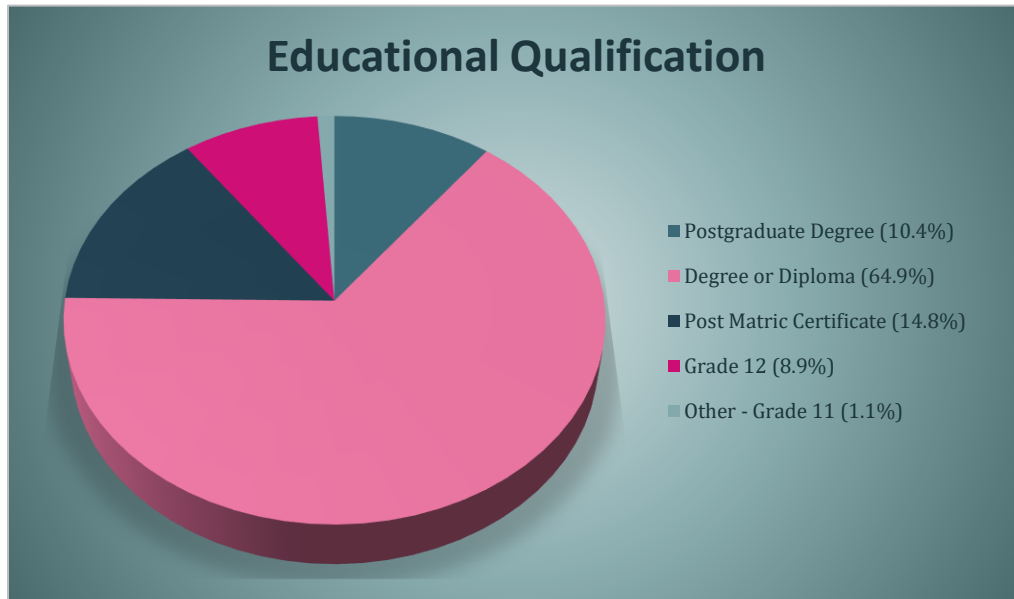


Figure 7.4: Sample distribution by educational qualification (n=461)

7.1.5 Distribution of Occupational Groups in the Sample

Table 7.5 and Figure 7.5 represent the occupational groups in the sample. The distribution was as follows: 36 (7.8%) doctors; 208 (45.1%) nurses; 16 (3.5%) pharmacists; 1 (0.2%) physiotherapists; 31 (6.7%) radiographers; 3 (0.7%) medical assistants; 166 (36.0%) administration.

Table 7.5
Occupational Distribution in the Sample (n=461)

Occupation	Frequency	Percentage	Cumulative Percentage
Doctor	36	7.8	7.8
Nurse	208	45.1	45.1
Pharmacist	16	3.5	3.5
Physiotherapist	1	0.2	0.2
Radiographer	31	6.7	6.7
Medical Assistant	3	0.7	0.7
Administration	166	36.0	36.0
Total	461	100.0	100.0

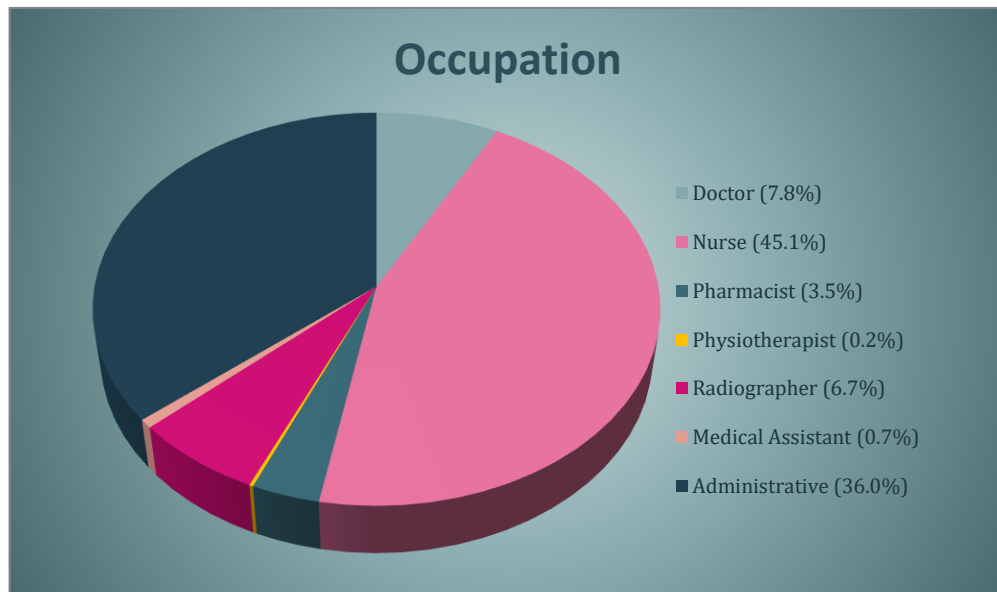


Figure 7.5: Occupation Distribution in the Sample (n=461)

7.1.6 Distribution of Tenure Groups in the Sample

Table 7.6 and Figure 7.6 illustrate the tenure distribution of the sample. This distribution demonstrated that 48.6% of the participants had been employed for one to five years; 34.0% had been employed for six to ten years; 14.8% had been employed for 11 to 20 years; and 2.6% had been employed for 21 or more years. Overall, employees with one to five years tenure (48.6%) comprised the majority of the sample.

Table 7.6.

Tenure Distribution in the Sample (n=461)

Tenure	Frequency	Percentage	Cumulative Percentage
One to five years	224	48.6	48.6
Six to ten years	157	34.0	34.0
Eleven to twenty years	68	14.8	14.8
Twenty-one and more years	12	2.6	2.6
Total	461	100.0	100.0

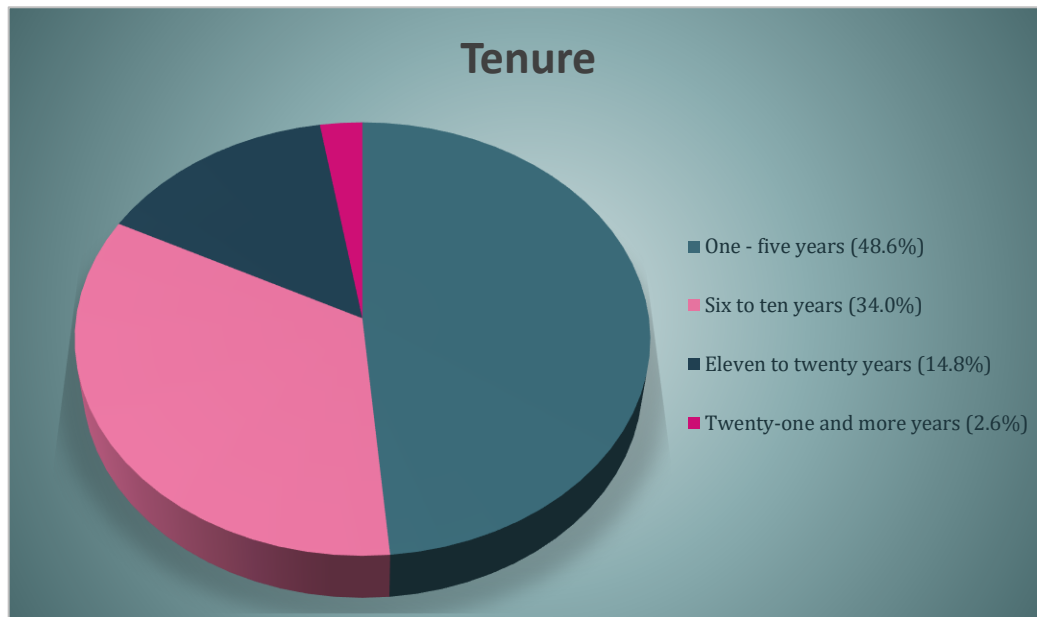


Figure 7.6: Sample Distribution by Tenure (n=461)

7.1.7 Summary of Socio-Demographic Profile of Sample

As summarised in Table 7.7 below, the socio-demographic profile of the sample indicated that significant characteristics had to be considered in the interpretation of the empirical results, namely gender, race, age, education, occupation and tenure in the organisation. The participants in the sample were predominately black African females, between 31 and 45 years old. Overall, the nursing occupation group was in the majority, as were employees with one to five years' tenure (48.6%). Overall, employees with degree- or diploma-level educational qualifications comprised the majority of the sample.

Table 7.7.

The Main Characteristics of the Sample Profile

Socio-demographic variable	Predominant characteristic	Percentage
Gender	Female	73.3
Race	Black/African	52.5
Age	31-45 years	60.7
Educational Level	Degree or Diploma	64.9
Occupation	Nurse	45.1
Tenure	One to Five years	48.6

Notes: N=461

7.1.8 Integration and Discussion: Biographical Profile of the Sample and Frequencies

As aforementioned, the biographic profile revealed that the participants in the sample were predominately black African females, aged between 31 and 45, and were employed in the healthcare industry across the Kwa-Zulu Natal region in South Africa. The sample average age of the participants was 36 years old. The predominant age group of this study is in line with Super's (1952, 1990) life-span theory, which provides that the majority of an organisation's workforce comprises individuals within this age group, i.e. the establishment stage. It therefore seems as if participants in this age group could benefit from the knowledge of the identified occupational wellness types.

Overall, the nursing occupation group was in the majority, as were employees with between one and five years' tenure. According to Mahlathi and Dlamini (2017), nurses comprise the largest group of healthcare providers in South Africa, and the quality of any healthcare system is directly dependent on the quality of care afforded by these healthcare professionals. The sample also included doctors, pharmacists, physiotherapists, radiographers, medical assistants, and administrative staff. In addition, employees with degree- or diploma-level educational qualifications comprised the majority of the sample.

The occupational group of doctors, which is the second largest group of healthcare professionals in South Africa (Mahlathi & Dlamini, 2017) were underrepresented in this study, together with the white and coloured race groups. The latter aspects pertaining to the biographical profile were considered when interpreting the results due to its limiting effect on the generality of the results to the broader adult working population within South Africa.

7.2 CHOOSING AND MOTIVATING THE PSYCHOMETRIC BATTERY

The selection of the psychometric battery was guided by the literature review. The measuring instruments were selected based on their applicability to the theories and models of this research study. The literature review may be categorised as exploratory research, in which the relevant models and theories of the employee wellbeing attributes, psychosocial antecedent variables and positive and negative outcome variables were presented in an integrated manner. The measuring instruments were chosen based on their validity, reliability, cost effectiveness and suitability for measuring the constructs investigated in this study.

The following measuring instruments were chosen:

7.2.1 Measurement of Wellness-Related Attributes

- The Utrecht Work Engagement Scale (UWES) developed by Schaufeli et al. (2002) to measure the construct of work engagement.
- A burnout scale by Asiwe, Jorgensen, and Hill (2014) was used to measure the construct burnout.
- The Dutch Work Addiction Scale (DUWAS) Schaufeli, Taris, and Bakker (2006) to measure workaholism. The 10-item version of the DUWAS (Schaufeli, Shimazu & Taris, 2009) was used for the study.
- The Job Satisfaction Scale (JSS) by Rothmann (2010) which measures how satisfied individuals feel with their jobs.

7.2.2 Measurement of Psychosocial Antecedent Variables

- The age of participants was determined from the socio-demographic section of the questionnaire.
- The Job Demands-Resources Scale (JD-RS) by Jackson and Rothmann (2005) was used to measure occupational stress on two factors, namely, job demands and job resources. A shorter version was used for this study.
- The Work-Related Sense of Coherence (Work-SoC) Scale by Bauer (2010) to measure its three dimensions of comprehensibility, manageability and meaningfulness.

7.2.3 Measurement of Positive and Negative Outcomes

- The Organisational Commitment Scale (OCS) was used to measure the positive outcome, organisational commitment (Meyer & Allen, 1991).
- The TIS-6 (Bothma & Roodt, 2013) was used to measure turnover intention. The TIS-6 was adapted from the 15-item scale initially developed by Roodt (2004).

7.2.4 Biographical variables

A socio-demographic questionnaire was used to ascertain personal data regarding gender, race, age, education, occupation and tenure.

The sub-sections which follow hereafter discuss the characteristics of the respective measuring instruments, as well as the psychometric properties of each.

7.2.5 Psychometric Properties of the Measures of the Employee Wellbeing Attributes

The discussion which follows explores the rationale, purpose, dimensions, administration, interpretation, validity, reliability and motivation of choice of the employee wellbeing attributes measuring instruments.

7.2.5.1 The Utrecht Work Engagement Scale (UWES)

a) Rationale and purpose of the UWES

The UWES (Schaufeli, Bakker, & Salanova, 2006) is a self-rating measure, consisting of vigour, dedication and absorption. The UWES is used to determine individuals' levels of work engagement (Schaufeli et al., 2006). The shortened version of the UWES (UWES-9) is used for this study (Schaufeli & Bakker, 2003).

b) Dimensions of the UWES

The UWES consists of 3 dimensions and 9 items, which are discussed in further detail hereunder:

Vigour: This dimension refers to one's levels of energy and mental resilience whilst working, the willingness to invest effort into one's work, and persistence in the face of difficulties. The dimension of vigour comprises three items.

Dedication: This dimension refers to a sense of significance, enthusiasm, pride, challenge and inspiration. The dimension of dedication comprises three items.

Absorption: This dimension refers to being fully concentrated and deeply engrossed in one's work and is characterised by time passing by quickly, as well as difficulty in detaching oneself from one's work. The final dimension, absorption, comprises three items.

c) Administration of the UWES

The UWES is a self-administered questionnaire and can be answered individually or in groups. Participants are given clear instructions on how to complete the questionnaire. It takes between five to ten minutes to complete the questionnaire, and there is no time limit. Supervision was not necessary as the questionnaire is self-explanatory. The items are structured in a statement format, on a 7-point Likert scale, and participants rate the statements on their self-perceived level of engagement. The total score is based on the sum of the three sub-scales (vigour, dedication and absorption) (Schaufeli et al., 2006). The scores for the three dimensions are then combined to provide an overall score for the construct (Schaufeli et al., 2002).

d) Interpretation of the UWES

Each of the sub-scales (vigour, dedication and absorption) is measured separately and reflects the participant's level of engagement. As a result, it is possible to determine which dimensions are perceived to be true for a respondent. A higher score reflects a higher level of engagement, whilst a lower score reflects a lower level of engagement. The response options range from 0 (never) to 6 (everyday). As a result, the minimum score that could be obtained for this scale is 0 and the maximum score is 54.

e) Validity and reliability of the UWES

Schaufeli et al. (2003) reported on the reliability of this questionnaire and indicated that it is a reliable instrument for the measurement of employees' level of engagement. Schaufeli et al. (2006) confirmed the validity of the scale in a study conducted in the Netherlands. Schaufeli et al. (2006) demonstrated that the Cronbach Alphas for each sub-scale ranged between 0.81 to 0.85 for vigour, between 0.83 to 0.87 for dedication, and between 0.75 to 0.83 for absorption. Schaufeli and Bakker (2003) demonstrated the factorial validity of the UWES-9 using confirmatory factor analyses. In addition, Schaufeli and Bakker (2003) concluded that the UWES-9 scores have acceptable psychometric properties and that the instrument can be used in studies on positive organisational behaviour.

f) Motivation for choice

The UWES was developed for the purpose of measuring employees' level of work engagement. Due to the conceptual congruence with the explanation of the construct of work engagement, and its high degree of validity and reliability, the instrument was deemed to be applicable to this study.

7.2.5.2 Burnout Scale

a) Rationale and purpose of the Burnout Scale

The burnout scale (Asiwe et al., 2014) is a self-rating measure used to determine if employees are experiencing burnout symptoms. The scale had been designed to assess the following components of burnout: fatigue, emotional exhaustion and cognitive weariness (Asiwe et al., 2014).

b) Dimensions of the Burnout Scale

The burnout scale consists of three dimensions and 17 items. A detailed description of the three dimensions follows hereunder:

Fatigue: The burnout scale (Asiwe et al., 2014) views fatigue as a physical component, and determines whether an employee may be experiencing fatigue in their job role. The sub-scale of fatigue is measured using five items.

Emotional exhaustion: The burnout scale (Asiwe et al., 2014) views emotional exhaustion as an emotional component, and determines whether an employee may be feeling emotionally spent in their job role. Six items measure the sub-scale of emotional exhaustion.

Cognitive weariness: The burnout scale (Asiwe et al., 2014) views cognitive weariness as a cognitive component, and determines whether an employee may be feeling cognitively overwhelmed in their job role. Six items measure the sub-scale of cognitive weariness.

c) Administration of the Burnout Scale

The burnout scale (Asiwe et al., 2014) is a self-administered questionnaire. The participants are provided with clear instructions on how to complete the questionnaire. It takes approximately ten minutes to complete, although there is no time limit. Supervision to complete the scale was not necessary as the questionnaire was self-explanatory. The participants are asked to respond to statements on a seven-point

frequency scale based on their self-perceived levels of burnout for each of the statements. The scores for the sub-scales (fatigue, emotional exhaustion and cognitive weariness) are combined in order to compute a total, overall score for the construct of burnout (Asiwe et al., 2014).

d) Interpretation of the Burnout Scale

Each sub-scale (fatigue, emotional exhaustion and cognitive weariness) is measured separately and reflects the participant's burnout on these dimensions. It is therefore possible to determine which dimensions are perceived to be true for the respondent and which are not. The higher the score, the truer the statement is for the respondent. The responses are measured on a scale from 0 (never) to 6 (everyday). As a result, the minimum score that could be obtained for this scale is 0 and the maximum is 102.

e) Validity and reliability of the Burnout Scale

Asiwe et al., (2014) cited reliable factors of $\alpha = 0.88$ for cognitive weariness, $\alpha = 0.85$ for fatigue, and $\alpha = 0.82$ for emotional exhaustion or withdrawal. According to Asiwe et al. (2014), the scale is regarded as a valid and reliable measure of burnout.

f) Motivation for choice

The scale was developed with the purpose of being a valid and reliable measure in the South African context (Asiwe et al., 2014). Furthermore, the scale was selected due to its conceptual congruence with the definition of burnout which is used in this study. Furthermore, the dimensions measured by the scale are applicable to and relevant in this research.

7.2.5.3 *The Dutch Work Addiction Scale (DUWAS)*

a) Rationale and purpose of the DUWAS

The DUWAS was originally developed by Schaufeli et al., (2006) for the measurement of workaholism. For the purposes of this study, the ten-item version of the DUWAS (Schaufeli et al., 2009) is used, which is intended to measure workaholism on two correlated factors: working excessively and working compulsively (Schaufeli et al., 2009).

b) Dimensions of the DUWAS

The DUWAS consists of ten items, which are divided into two sub-scales. The sub-scales follow hereunder:

Working excessively: The working excessively sub-scale is a behavioural dimension and measures if an employee has the tendency to excessively take on many work-related tasks and devote an excessive amount of time to working at the expense their social relationships and leisure time (Rantanen et al., 2014). The sub-scale comprises five items, including for example: “I seem to be in a hurry and racing against the clock”, and “I find myself continuing to work after my co-workers have called it quits”.

Working compulsively: The working compulsively subscale is a cognitive/mental dimension and measures whether an employee is experiencing an internal, obsessive obligation to work, with the reluctance to switch off from work, even when not working (Rantanen et al., 2014). The sub-scale comprises five items.

c) Administration of the DUWAS

The DUWAS is a self-administered questionnaire which takes about ten minutes to complete, although there is no time limit. Clear instruction for its completion is provided, and supervision is not necessary as the questionnaire being self-explanatory. Respondents are asked to respond to statements on a four-point Likert scale regarding their self-perceived workaholic tendencies. The scores for the two sub-scales (working excessively and working compulsively) are then combined to provide an overall score for the construct (Schaufeli et al., 2009).

d) Interpretation of the DUWAS

The two sub-scales (working excessively and working compulsively) are measured separately and indicate the participant’s self-reflection of their workaholic tendencies. Therefore, it is possible to determine which dimension is perceived to be true for a respondent, and which is not. The higher the score, the truer the statement is for the respondent. Responses range from 1 (almost never) to 4 (almost always). Therefore, the minimum score that could be obtained for this scale is 10 and the maximum score is 40.

e) Validity and reliability of the DUWAS

Libano Gumbau, Salanova, and Schaufeli (2010) conducted confirmatory factor analyses to determine the psychometric properties of the two-factor structure of the scale (i.e. working excessively and working compulsively). The results confirmed the two-factor structure of the scale, and the two dimensions met the reliability and validity with high internal consistency, ranging from 0.75 to 0.85 (Libano et al., 2010). However, a study by Molino, Ghislieri, and Colombo (2019) indicates supportive evidence in favour of a one-factor scale structure, as opposed to the commonly supported two-factor structure, as applied in this

study. Results from Mäkikangas et al. (2015) reported a Cronbach Alpha co-efficient of 0.78 for the scale. Rantenen et al. (2015) supported the validity of the instrument in measuring workaholism.

f) Motivation for choice

The DUWAS was designed to measure workaholism in the organisational context, and is relevant to this research. Furthermore, the DUWAS was selected due to its conceptual congruence with the explication of the construct of workaholism as well as the instrument's high degree of validity and reliability.

7.2.5.4 The Job Satisfaction Scale (JSS)

a) Rationale and purpose of the JSS

The JSS (Rothmann, 2010) is a self-rating measure. The purpose of the questionnaire is to determine individuals' levels of job satisfaction.

b) Dimensions of the JSS

The JSS comprises three items and measures how satisfied individuals are with their jobs. Examples of answers included: "I feel fairly satisfied with my present job", and "I find real enjoyment in my work" (Diedricks, 2012).

c) Administration of the JSS

The JSS is a self-administered instrument. The participants are provided with clear instructions as to how to complete it. It takes approximately five minutes to complete, although respondents are not given a specified time limit within which to complete it. Supervision for completing the questionnaire was not necessary as the questionnaire is self-explanatory. The items on the JSS are structured in a statement format, and respondents rate the statements on their self-perceived job satisfaction. The scores for the three items are added together to provide an overall score for the construct of job satisfaction.

d) Interpretation of the JSS

The three items on the JSS are measured separately and reflects the extent to which the respondent feels either satisfied or dissatisfied with their job. As a result, it is possible to determine which individual item is previewed to be true for the participant and which is not. The higher the score accorded to a statement, the higher the level of satisfaction experienced by the respondent. The response options range from 1

(totally disagree) to 5 (totally agree). The minimum score that could be obtained for this scale is therefore 3, whilst the maximum score is 15.

e) Validity and reliability of the JSS

Research findings on the reliability of the questionnaire indicate that it is a reliable instrument for measuring employees' job satisfaction (Diedricks, 2012). Diedricks (2012) and Rothmann (2010) reported a Cronbach alpha co-efficient for the JSS of 0.84.

f) Motivation for choice

The JSS was used for this study due to its conceptual congruence with the explanation of the construct of job satisfaction. It is also easy to administer and is appealing due to consisting of only three items, as questionnaire length was a concern when compiling the measuring battery.

7.2.6 Psychometric Properties of The Measures of the Psychosocial Antecedent Variables

The discussion below explores the rationale and purpose, dimensions, administration, interpretation, validity, reliability and motivation for choice of the psychosocial antecedent variable used to measure instruments.

7.2.6.1 Age was Determined from Biographical Section of the Questionnaire

The socio-demographic instrument used in this study was a self-rating measure consisting of gender, race, age, education, occupation and tenure. The questionnaire was designed in order to obtain overall personal characteristics from employees', with age being of particular relevance to this study.

7.2.6.2 The Job Demands-Resources Scale (JDRS)

a) Rationale and purpose of the JDRS

The JDRS is a self-rating measure which was developed by Jackson and Rothmann (2006) in order to measure occupational stress on two factors, job demands and job resources. For the purposes of this study, the JDRS was adapted to a shorter version due to concerns regarding questionnaire length.

b) Dimensions of the JDRS

The shortened version of the JDRS consisted of 25 items and is divided into two dimensions - job demands and job resources. A detailed description of the two dimensions follows hereunder.

Job demands: The job demands dimension measures work overload (pace, amount of work, mental overload and emotional overload). The latter items were also measured by Nell (2015) who also shortened the JDRS measure used in order to investigate job demands that are placed on nurses. The latter dimension comprised nine items.

Job resources: The job resources dimension measures organisational support and relationships with colleagues, as was studied by Rothmann (2008). This dimension comprises 16 items.

c) Administration of the JDRS

The JDRS is a self-administered questionnaire, and participants are provided with clear instructions on how to complete it. It takes approximately 15 to 20 minutes to complete, however there is no time limit. The items are structured in question format and are rated on a four-point scale. Participants respond to questions based on self-perceived job demands and job resources. The scores for the job demand and job resources dimensions are combined to provide an overall score for the construct of JDRS (Jackson & Rothmann, 2006).

d) Interpretation of the JDRS

Each sub-scale (job demands and job resources) is measured separately and indicates the participants' perception regarding job demands, as well as available job resources. It is therefore possible to determine which dimensions are perceived to be true for the participant and which are not. The higher the score, the higher the job demands or job resources is for the participant. The responses are measured on a scale ranging from 1 (never) to 4 (always). As a result, the minimum score that could be obtained for this scale is 25 and the maximum score is 100.

e) Validity and reliability of the JDRS

Rothmann et al. (2006) conducted factor analysis to confirm the validity of the scale. The authors concluded a five-factor structure of the scale, and stated that the co-efficients compared favourably with a guideline of 0.90. Jackson and Rothmann (2005) confirmed through principal components analysis, and a subsequent exploratory factor analysis, a seven-factor structure of the JDRS. In relying on the shortened version of the sub-scale, Nell (2015) found good internal consistency reliability for the factors used to measure job demands. With regards to the job resources sub-scale, Rothmann (2006) reported

organisational support ($\alpha = 0.88$) and relationships with colleagues ($\alpha = 0.76$) to be reliable factors of job resources from the scale.

f) Motivation for choice

The JDRS is a commonly used instrument of choice for the measurement of job demands and resources (Nell, 2015). As a result, the shortened sub-scales of the JDRS was chosen for this study due to the conceptual congruence with the explication of the constructs of the job demands and job resources and their demonstrated a high degree of validity and reliability.

7.2.6.3 The Work-Related Sense of Coherence Scale (Work-SoC)

a) Rationale and purpose of the Work-SoC

The Work-SoC scale is a self-rated measure. The scale was developed by Bauer (2010) to determine an individual's self-perceived work-related sense of coherence, based on three dimensions which are discussed hereunder.

(b) Dimensions of the Work-SoC

The questionnaire consists of nine items and three sub-scales. The following is a detailed description on each of the sub-scales. Comprehensibility: The comprehensibility sub-scale measures whether a participant perceived their work situation as structured, consistent and clear (Vogt et al., 2013), and comprises four items.

Manageability: The manageability sub-scale measures the extent to which a participant perceived that they have an adequate supply of resources to deal with demands they face at work (Vogt et al., 2013) and consists of two items.

Meaningfulness: The meaningfulness sub-scale measures the extent to which a participant believed their work situation deserves commitment and involvement (Vogt et al., 2013) and consists of three items.

c) Administration of the Work-SoC scale

The Work-SoC scale is a self-administered questionnaire and takes approximately to 10 minutes to complete, but there is no time limit. Clear instructions are provided. The items are presented on a continuum and respondents are required to indicate where on the continuum they fall for each item.

d) Interpretation of the Work-SoC scale

Each item is measured separately, and the score reflects the respondent's self-perception with regards to their current job situation, per item. Therefore, it is possible to determine which items are perceived to be true for the participants and which are not. The higher on rating on the continuum, the more the participant believes they identify with the item, or the more the participant believes they possess of the item. The continuum ranges from seven to one, where 7 indicates a higher score and 1, the lowest score. The minimum score that could be obtained for this scale is therefore 9 whilst the maximum score is 63.

e) Validity and reliability of the Work-SoC scale

Van der Westhuizen and Ramasodi (2016) provide preliminary evidence that the Work-SoC Questionnaire can be used as a valid and reliable measure of Work-SoC in South African organisations. The authors founded a three-factor model for measuring instruments and confirmed its factorial and construct validity. In terms of reliability, van der Westhuizen and Ramasodi (2016) reported Cronbach alpha co-efficient of 0.87 for comprehensibility, 0.78 for manageability, 0.89 for meaningfulness, and 0.93 for the total Work-SoC scale. Furthermore, Zweber (2014) reported Cronbach alpha co-efficient of 0.74 for comprehensibility, 0.53 for manageability, and 0.82 for meaningfulness.

f) Motivation for choice

The Work-SoC scale was selected for this study due to the conceptual congruence with the elicitation of the construct of Work-SoC and its high degree of validity and reliability.

7.2.7 Psychometric Properties of the Measures of the Positive and Negative Outcome Variables

The discussion below explores the rationale and purpose, dimensions, administration, interpretation, validity, reliability and motivation of choice of the positive and negative outcome-measuring instruments.

7.2.7.1 The Organisational Commitment Scale (OCS)

a) Rationale and purpose of the OCS

The OCS (Meyer & Allen, 1997) is a self-rating, three-dimensional construct. The three dimensions, namely, affective, continuance and normative commitment, were designed to measure employees' level of commitment. The shortened, revised version (Meyer, Allen & Smith, 1993) was used for this study, due to concerns regarding the length of the questionnaire.

b) Dimensions of the OCS

The OCS consists of 18 items and three sub-scales. A detailed description of the three dimensions follows hereunder.

Affective commitment

This sub-scale measures the extent of employees' emotional attachment to, identification with, and involvement in an organisation (Meyer & Allen, 1997), and comprises eight items.

Continuance commitment

This sub-scale focuses on determining an employee's commitment to an organisation, based on the costs that they associate with leaving it (Meyer & Allen, 1997), and comprises eight items.

Normative commitment

This sub-scale measures the extent to which employees remain within an organisation due to feeling a sense of obligation (Meyer et al., 1997) and comprises six items.

c) Administration of the OCS

The OCS is a self-administered questionnaire which takes approximately 15 to 20 minutes to complete, although there is no time limit. Clear instructions for its completion were provided. The items were structured in statement format and are scored on a five-point Likert type scale. The respondents rate the statements on the basis of their self-perceived organisational commitment. The scores for each of the sub-scales (affective, continuance and normative commitment) are subsequently combined to provide an overall score for the construct of OCS (Meyer & Allen, 1997).

d) Interpretation of the OCS

Each sub-scale (affective, continuance and normative commitment) is measured separately and reflects the respondents' level of commitment on each of these dimensions. As a result, it is possible to identify which dimensions are perceived to be true for the participant and which are not. The higher the score, the truer the statement is for the respondent. The responses for the OCS range from 1 (strongly disagree) to 5 (strongly agree). The minimum score that could be obtained for this scale is 18 and the maximum score is 90.

e) Validity and reliability of the OCS

Earlier studies provide evidence for the reliability and validity of the affective, continuance and normative scales. Meyer and Allen (1991) demonstrated the co-efficient alphas for affective commitment as 0.87, continuance commitment as 0.75, and normative commitment as 0.79. In terms of its reliability for a South African sample, Jackson, Rothmann, and Van der Vijver (2006) reported an alpha co-efficient of 0.88 for the scale. According to Harrison (1993), there is evidence of the construct validity of the scale. The total organisational commitment scale has a reliability of 0.70 (Meyer & Allen, 1997).

f) Motivation for choice

The OCS is a well-established measure of organisational commitment and has been successfully applied in the South African context (Jackson et al., 2006). Furthermore, the scale has a high degree of reliability and validity.

7.2.7.2 The Turnover Intention (TIS-6)

a) Rationale and purpose of the TIS

The TIS-6 (Roodt, 2004) is a self-rating measure that was designed with the aim of assessing turnover intention – the intention to leave or remain within an organisation. The adapted six-item version (TIS-6) (Bothma & Roodt, 2013) was used for this study, due to concerns regarding the questionnaire length.

b) Dimensions of the TIS-6

The TIS-6 comprises six items. Examples from the scale include: “How often have you considered leaving your job”, and “How often do you look forward to another day at work” (Bothma & Roodt, 2013). All questions in the scale aim to determine if an employee has the intention of leaving their current employment.

c) Administration of the TIS-6

The TIS-6 is a self-administered questionnaire. Respondents are provided with clear instructions as to how to complete it. It takes approximately five to ten minutes to complete the questionnaire, however, there is no time limit. The TIS is structured in question format and is scored on a five-item Likert scale. The scores for each of the six items are combined to provide a total overall score for the construct of TIS-6.

d) Interpretation of the TIS

Each of the six items is rated individually and reflects the participant's perception of their intention to leave or remain within the organisation. As a result, it is possible to determine which individual item is previewed to be true for the participant and which are not. The higher the score, the stronger the respondent identifies with the question posed to them. A score of 1 = never and 5 = every day. The minimum score that could be obtained for this scale is 6 and the maximum is 30.

e) Validity and reliability of the TIS

Studies by Jacobs (2005) and Martin (2007) prove Roodt's (2004) original questionnaire to be both reliable ($\alpha = 0.91$ and $\alpha = 0.89$ respectively) and factually valid. Bothma and Roodt (2013) reported a Cronbach alpha reliability co-efficient ($\alpha = 0.80$) for the TIS-6 and confirmed both the factorial validity and reliability of the scale. In addition, Oosthuizen, Coetzee, and Munro (2016) reported a Cronbach alpha coefficient for the TIS-6 of 0.88, indicating high internal consistency reliability for the scale.

f) Motivation for choice

The TIS was designed to measure an employee's intention to either leave or remain within an organisation and relates to this research. Furthermore, the TIS-6 has yielded good reliability and validity properties.

7.2.8 Limitations of the Psychometric Battery

All of the instruments used in this study were self-report instruments. Self-report instruments have many disadvantages. According to Demetriou, Ozer, and Essau (2015), the chief disadvantage of self-report questionnaires is, simply put, the possibility of respondents providing invalid answers. The question posed by Paulhus and Vazire (2007, p. 228) is 'why should we trust what people say about themselves?'. When responding to items, respondents may choose not to be truthful, especially where sensitive questions arise. The latter phenomenon is known as social desirability bias, where respondents may choose to respond in a socially desirable way (Demetriou et al., 2015). Paulhus and Vazire (2007) concurred and opine that even if respondents are trying their best to be forthright and insightful, their self-reports are subject to numerous sources of inaccuracy, such as self-deception and memory. Demetriou et al. (2015) further reported that self-report questionnaires extract responses which may be subjective, and is therefore easy for respondents to exaggerate their responses.

The instruments utilised in this study, namely the UWES, JSS, Burnout Scale, DUWAS, JDRS, Work-SoC scale, OCS and TIS were chosen after an in-depth review of numerous instruments that are related to occupational wellbeing, possible psychological antecedents to occupational wellbeing, as well as the positive and negative outcomes of occupational wellbeing. The limitations of the measuring instruments were considered during the interpretation of the findings derived from the research results.

7.3 ETHICAL CONSIDERATIONS AND ADMINISTRATION OF THE PSYCHOMETRIC BATTERY

The researcher applied for ethical clearance from the University Research Ethics committee. The researcher obtained permission from all of the Hospital Managers and Hospital Research and Ethics Boards involved. In order to gather the information required for this study, questionnaire booklets were handed out by the researcher (once consent was obtained from the hospitals) to approximately 1680 hospital employees.

The eight instruments, as was discussed earlier, were compiled in a booklet. The booklet also contained an introduction to the project and a consent form to be completed and signed by each participant should they choose to do so. The respondents were invited to participate voluntarily in the study by means of a participation invitation letter, which was attached to the cover of the questionnaire booklet. The covering letter informed participants that completing the questionnaire and returning it to the researcher constitutes an agreement for the results to be used for research purposes only. Participants were assured of confidentiality. Confidentiality was assured by informing participants that all completed questionnaires would be placed in a sealed box situated in the reception area of the respective hospitals. The covering letter also contained the following: an explanation of the purpose of the study, the participants rights, the fact that the study would not harm them in any way, the procedure for completing the questionnaire and fact that the participant was not in any way forced to complete the questionnaire. The researcher would empty the box at regular intervals. The researcher handed out questionnaire booklets to the various departments at the hospitals, in so far as possible, and left additional copies at the reception for areas with restricted access. Heads of Departments assisted in collecting the booklets from the reception and making them available to their staff. Once completed, staff members dropped the questionnaires off in the box situated in the reception area.

In order to comply with legislation, care was taken in both the choice and administration of the psychometric battery. The researcher complied with section 8 of the Employment Equity Act, No. 55 of 1998, which states that all psychological testing and similar assessments are prohibited, unless the test is scientifically valid and reliable and can be applied fairly to all employees, and is not biased against any employee or group. The validity of all the items were evaluated, a reliable process was followed during the data collection process, and the data was analysed, reported and interpreted in a valid, reliable, fair and unbiased manner.

7.4 SCORING OF THE PSYCHOMETRIC BATTERY

Responses to each of the instrument measures were first captured on a Microsoft Excel spreadsheet where each row indicated a participant and each column indicated a question. An independent statistician scored the completed questionnaires. All the data was imported and analysed using statistical methods, specifically using the statistical programmes SPSS (Statistical Package for Social Sciences) Version 26.0 for the Microsoft Windows platform (SPSS Inc. 2011).

7.5 FORMULATION OF THE RESEARCH HYPOTHESES

Research hypotheses were formulated in order to achieve the research aims of this research study. A research hypothesis can be defined as a tentative explanation of the research problem, a possible research outcome, or an educated guess as to the research outcome. According to Tredoux and Durrheim (2013), a research hypothesis is rejected when it cannot be answered through scientific observation and may only be accepted if scientifically proven. In order to address the empirical research questions formulated in Chapter 1, a number of research hypotheses were formulated. The research hypotheses are summarised in Table 7.8 which follows hereunder.

Table 7.8

Research Hypotheses

Research aim	Research hypothesis	Statistical procedures
Research aim 1: To conduct an empirical investigation that explores the direction and magnitude of the statistical inter-correlations between the employee wellbeing attributes (burnout, work engagement, workaholism, job satisfaction), and determine which type combinations of occupational wellbeing can be distinguished based on the measurements of burnout, work engagement, workaholism and job satisfaction.	H1: Four occupational wellbeing types will emerge parallel with the four quadrants of the circumplex model	Cluster analysis using k-means
Research aim 2: To determine if the occupational wellbeing type combinations differ with regard to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence).	H2a: The occupational wellbeing type combinations differ with regard to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence). H2b: The psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) significantly predict the occupational wellbeing types.	MANOVA and Multinomial logistic regression analysis
Research aim 3: To determine whether the occupational wellbeing type combinations positively and significantly predict the positive and negative outcome variables (organisational commitment and turnover intention).	H3a: The occupational wellbeing type combinations positively and significantly predict the positive and negative outcome variables (organisational commitment and turnover intention). H3b: The occupational wellbeing type combinations differ significantly related to organisational commitment. H3c: The occupational wellbeing type combinations differ significantly related to turnover intention.	MANOVA and Multiple regression analysis
-Research aim 4: To determine if the occupational wellbeing types moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and the positive and negative outcome variables (organisational commitment and turnover intention), in order to draw conclusions regarding the nomological net of the identified occupational wellbeing types.	H4: The occupational wellbeing types moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and the positive and negative outcome variables (organisational commitment and turnover intention) and conclusions can be drawn regarding the nomological net of the occupational wellbeing types.	Hierarchical moderated regression analysis

As demonstrated in Table 7.8, the research hypotheses are to be tested by means of descriptive, correlation, and inferential (multivariate) statistics.

7.6 STATISTICAL PROCESSING OF THE DATA

The objective of quantitative research is to ensure that valid inferences may be drawn from sample data of a larger population in order to allow for generalisation (Tredoux et al., 2013). However, due to a lack of sample representation, it is not plausible to expect a non-probability purposive sample to yield adequate sample values from a population (Bryman, 2012). For this reason, statistical methods have been developed which allow a researcher to confidently determine which such inferences may be drawn. According to Isotalo (2001), statistics is the methodology which has been developed for the purpose of collecting, analysing, interpreting and drawing conclusions from information.

The statistical procedures that were utilised in this study entailed descriptive statistical analysis, correlational analysis and inferential (multivariate) statistics.

7.6.1 Stage 1: Descriptive Statistical Analyses

Descriptive statistics do exactly what they say - they present and describe data (Cohen, Manion, & Morrison, 2011; Salkind, 2012; Pallant, 2013). According to Salkind (2012, p. 162), descriptive statistics allow the researcher to obtain an accurate first impression of “what the data look like”. In addition to describing the data, descriptive statistics also allows the researcher to check the variables for any violation of the assumptions that underlie the statistical assumptions used to address the research questions. Furthermore, it enables the researcher to address the specific research questions (Pallant, 2013).

This stage consists of the following steps:

- Determining the validity of the measuring instruments through confirmatory factor analysis (CFA) and exploratory factor analysis (EFA);
- Determining the internal consistency reliability of the measuring instruments by means of Cronbach’s Alpha co-efficient; and
- Determining the means, standard deviations, kurtosis, and skewness of the categorical and frequency data

7.6.1.1 Validity: Confirmatory Factor Analysis and Exploratory Factor Analysis

(a) Confirmatory factor analysis

This is the first stage to confirming the validity of the measuring instruments actually involved a multivariate statistical method, structural equation modelling (SEM). This statistical method takes a confirmatory (i.e. hypothesis testing) approach to analyse the structural theory bearing on phenomenon (Byrne, 2010). According to Holtzman and Vezzu (2010), SEM generally refers to models where causal relationships are observed between latent variables, and the CFA process then determines whether a hypothesised structure provides a good fit to the data. CFA is regarded as a special case of SEM.

Hurley (1997) provides that confirmatory factor analysis is generally used for the following four main reasons:

- psychometric evaluation of measures;
- construct validation and determining the relationships between constructs;
- testing of method effects; and
- testing measurement invariance

SEM techniques, such as CFA, arguably provide a more complete version of the information as to the extent to which a research model is supported by the data (Gefen, Straub, & Boudreau, 2000). The appeal of SEM techniques is that it is a highly flexible and comprehensive approach and allows researchers to recognise the imperfect nature of their measures (Suhr, 2006).

In examining the statistical significance of measures, it is recommended that the researcher should consider the following approximate fit indices: the Chi Square (χ^2); Root Mean Square of Approximation (RMSEA); Comparative Fit Index (CFI); Normed Fit Index (NFI); Root-Mean Square Residual (RMR), and the Akaike Information Criterion (AIC) (Bryman, 2012; Cohen et al., 2011), as was applied in this study.

i) Chi Square (χ^2)

The Chi-square test measures the difference between a statistically-generated and expected result, as compared to an actual result, to determine whether there is a statistically significant difference between them (i.e. to determine if the frequencies observed are significant - it is therefore a measure of “goodness of fit” between an expected and an actual result or set of results) (Cohen et al., 2011). The non-significant χ^2 value signifies that two matrices are similar, indicating that the implied theoretical model significantly

reproduces the sample variance-covariance relationship in the matrix (Schumacker & Lomax, 2012). The researcher is, however, interested in obtaining a non-significant X^2 value with its associated degrees of freedom and it is therefore more appropriate to refer to the Chi-square test as a measure of badness-of-fit (Schumacker & Lomax, 2012). The Chi-square value means nothing on its own and can be meaningfully interpreted only in relation to its associated level of significance (Cohen et al., 2011). Whilst there is no consensus regarding the acceptable ratio for the chi-square, Wheaton et al. (1977) suggested a ration from as high as 5.0 to as low as 2.0.

ii) Root Mean Square of Approximation (RMSEA)

The Root Mean Square Error of Approximation is an index of the difference between the observed covariance matrix per degree of freedom and the hypothesised covariance matrix, which represents the model (Chen, 2007). RMSEA takes the model into consideration as it reveals the extent of freedom, as well (Chen, 2007). The RMSEA is viewed as a badness-of-fit index, one where a value of zero indicates the best fit. RMSEA values smaller than 0.05 indicate a convergence fit to the analysed data of the model, while it illustrates a fit which is close to good when it produces a value between 0.05 and 0.08. A RMSEA value which falls between the range of 0.08 and 0.10 indicates a fit, which is neither good or bad (Chen, 2007). According to Hu and Bentler (1999), a RMSEA index smaller than 0.06 reflects a criterion that will suffice, whilst Steiger (2007) provides that a stringent upper limit of 0.07 appears to be the general consensus among authorities in the area. One of the greatest advantages of the RMSEA is its ability to calculate a confidence interval around its value (MacCallum et al., 1996).

iii) Comparative Fit Index (CFI)

The Comparative Fit Index is an incremental fit index which is a corrected version of relative non-centrality index (Chen, 2007). With the CFI, the extent to which the tested model is superior to the alternative model established with manifest covariance matrix is evaluated (Chen, 2007). Schemelleh-Engel and Moobrunner (2003) stated that the CFI produces values between 0.0 and 1.0 and high values indicate good fit. When the CFI value is 0.97, it signifies that the fit in question is better compared to the independence model, whilst an acceptable fit is in the question provided that the CFI value is larger than 0.95 (Schemelleh-Engel & Moorbrugger, 2003). According to Fan, Thompson, and Wang (1999), the CFI is included in all SEM programs and is one of the most popularly reported fit indices due to it being one of the measures least effected by sample size.

iv) Normed Fit Index (NFI)

The NFI is also known as the Bentler-Bonett Normed Fit Index (Moss, 2016). The NFI assesses the model by comparing the X^2 value of the model to the X^2 of the null model (Hooper, Coughlan, & Mullen, 2008). The fit index varies from 0.0 to 1.0, with values greater than 0.90 indicating a good fit. (Moss, 2016). According to Hooper et al. (2008) and Kline (2012), recent suggestions state that the cut-off criteria should be $NFI \geq 0.95$. Values above 0.95 are regarded as good, between 0.90 and 0.95 as acceptable and values below 0.90 suggest a need to rectify the model (Kline, 2012).

A major drawback to this index is that it is sensitive to sample size, and underestimated fit for samples less than 200, and is for this reason, not seen as reliable (Kline, 2012). This problem was rectified with the NNF index, which is also known as the Tucker-Lewis index (Hooper et al., 2008).

v) Root-Mean Square Residual (RMR)

The RMR is the square root of the difference between the residuals of the sample covariance matrix and the hypothesised covariance model (Chen, 2007; Hooper et al., 2008). The range of the RMR is calculated based on the scales of each indicator, as a result, if a questionnaire contains items with varying levels, the RMR then becomes difficult to interpret (Hooper et al., 2008). Values for the RMR range from zero to 1.0 and well-fitting models obtain values less than 0.05, whilst values as high as 0.08 are seen as acceptable (Hooper et al., 2008). An RMR of 0 signifies a perfect fit (Hooper et al., 2008).

vi) Akaike Information Criterion (AIC)

AIC is a model selection tool which compares different models on a given outcome (Snipes & Taylor, 2014). With AIC, the traditional maximum likelihood framework is applied to statistical modelling (Cavanaugh & Neath, 2019). According to Snipes and Taylor (2014), once a best model is selected, researchers may then use null hypothesis testing in order to determine the relationship between specific variables and the outcomes that are of interest. Lower AIC values suggest a better model and is a relative measure of model fit (Cavanaugh & Neath, 2019).

The CFA process allowed the researcher to determine the validity of the measures investigated in this study, specifically construct validity.

Construct validity was determined by conducting a CFA on all measuring instruments (UWES, JSS, Burnout Scale, DUWAS, JDRS, Work-SoC scale, OCS, TIS), using the AMOS procedure. According to Brown (2000), construct validity has been traditionally defined as the experimental demonstration that a test measures the construct that it claims to be measuring. According to Messick (1998), when a certain attribute is required to be measured, construct validity is generally used as it is the most applicable form of validity for the assessment of measurements. Validity cannot be sufficiently stated by means of numerical value but should rather be stated as a “matter of degree”. (Linn & Gronlund, 2000, p. 75). Gregory (2000) states further that validity results may be viewed as high, medium or low, or range from weak to strong.

(b) Exploratory factor analysis

Owing to the fact that a number of scales produced low CFA results, exploratory factor analysis was conducted in order to evaluate each of the scales (UWES, JSS, Burnout Scale, DUWAS, JDRS, Work-SoC scale, OCS, TIS) individually, in order to confirm the validity of the factor structure of each scale.

According to Brown (2010), the main objectives of exploratory factor analysis include:

- Reducing the number of variables;
- Examining the structure or relationship between variables;
- Detecting and assessing the uni-dimensionality of a theoretical construct;
- Evaluating the construct validity of a scale, test, or instrument;
- Developing parsimonious (simple) analysis and interpretation; and
- Addressing multicollinearity (two or more variables that are correlated).

In order to minimise error, the principal axis factor analysis with a direct oblimin rotation and the Kaiser normalisation technique were selected as the best techniques to examine the factor structure of all the scales in this study. Factor rotation was used to show the pattern loadings in the measures. The direct oblimin rotation, is an oblique rotation that is used to maximise the variance of the loadings of a factor on all the variables in a factor matrix, thereby minimising the number of variables that have high loadings on any one specific factor (Pallant, 2010). Each factor will either have a high or low loading of a particular variable (Pallant, 2010).

The pre-established eigenvalues were assessed to identify the number of factors to use in the factor analysis. Initial eigenvalues with a total value higher than 1.0 indicated a strong extraction (Pallant, 2010). All factors with eigenvalues below 1.0 were considered insignificant.

7.6.1.2 Reliability: Cronbach's Alpha Co-efficient

Reliability is not only a concept, but also a practical measure of how consistent and stable a measurement instrument or test may be. Furthermore, reliability occurs when a measuring instrument measures the same thing more than once, and it results in the same outcomes. (Salkind, 2012) Numerous aspects exist when it comes to reliability, and one of the main issues concerns a scale's internal consistency (Pallant, 2013). Internal consistency refers to the extent to which the items which comprise a scale "hang together" (Pallant, 2013, p. 95). Simply put, are they all measuring the same underlying construct? It has been argued that Cronbach's alpha co-efficient is one of the most commonly used indicators of internal consistency (Pallant, 2013; Salkind, 2012). Moreover, Cronbach's alpha co-efficient is an index of reliability that is associated with the variation that is accounted by the true score of the underlying construct (Cronbach & Shavelson, 2004).

Therefore, Cronbach's alpha co-efficient was used in this study in order to determine the internal consistency reliability of the eight instruments. Cronbach's alpha co-efficient ranges from 0, indicating that there is no internal consistency, to 1, which indicates the maximum internal consistency (Cohen et al., 2011). Therefore, a higher alpha value is indicative of a more reliable instrument (Cohen et al., 2011). A Cronbach's alpha co-efficient of 0.70 or greater is widely considered as desirable (Taber, 2017). Hinton, Brownlow, McMurray, and Cozens (2004) suggest that a discussion amongst researchers as to where the appropriate cut-off points should lie in terms of reliability has long since been a topic for debate. The authors provide that a range of 0.50 to 0.70 may be considered moderate reliability.

7.6.1.3 Means, Standard Deviations, Skewness, Kurtosis and Frequencies

The means and standard deviations for all the employee wellbeing attributes (burnout, work engagement, job satisfaction and workaholism), the psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), and the positive and negative outcomes (organisational commitment and turnover intention) were determined in the empirical study (Cohen et al., 2011; Salkind, 2012). The mean (M) is a measure of central tendency (Salkind, 2012), and is defined as the sum of all the values in a set, divided by the number of values (Hon, 2013; Pallant, 2013). According

to Hon (2013), the mean is sensitive to any change in value. Standard deviation (*SD*) is a standardised measure of the dispersal of the scores, i.e. how far away from the mean or average each score is. Standard deviation is calculated as the square root of the variance (Cohen et al., 2011). Salkind (2012) asserts that standard deviation is the most commonly used measure of variability. The larger the standard deviation, the more variable the set of scores are (Salkind, 2012).

In addition, skewness and kurtosis were determined. Skewness illustrates the degree of asymmetry of a distribution around its mean and is used to determine whether data is skewed positively, negatively or normally (Pallant, 2013). A data set or distribution is symmetrical if it looks the same on either side of the centre point (Salkind, 2012). Positive values for skewness indicate data that is skewed to the right, whilst negative values for skewness indicates data that is skewed to the left (Salkind, 2012). Kurtosis is a measure of how peaked a distribution is and how steep the slope or spread of data is around its peak (Cohen et al., 2011). Skewness and kurtosis values that range between -1 and +1 have been recommended for conducting parametric tests (Cohen et al., 2011).

The use of frequency tables allows the researcher to illustrate the distribution of socio-demographic variable data, and further enables the researcher to describe the sample population (Cohen et al., 2011).

7.6.2 Correlation Analysis: Pearson Product Moment Correlation

Correlational analysis is used to describe the strength and direction of the linear relationship between two (or more) quantitative variables (Gogtay, Deshpande, & Thatte, 2017; Pallant, 2013). According to Cohen et al. (2011), if a relationship exists between the variables, then a change in one variable will result in a continuous and predictable change in another variable. In this study, correlational analysis methods were applied to test the strength and direction of the relationship between the employee wellbeing attributes (burnout, work engagement, workaholism and job satisfaction), with specific reference to the positive or negative relationships that exist between the scores on the Burnout Scale, UWES, DUWAS, JSS, JDRS, Work-SoC scale, OCS and TIS-6 scales in order to determine combinational types of occupational wellbeing, and associations between the variables.

In this study, Pearson's product moment correlation co-efficient (*r*) was used to calculate the strength and direction (positive or negative) of the relationship between the variables of burnout, work engagement, workaholism and job satisfaction, job demands and job resources, work-related sense of coherence,

organisational commitment, and turnover intention (Pallant, 2013). A positive correlation indicates that as one variable increases, so does the other, whilst a negative correlation indicates that as one variable increases, the other decreases (Cohen et al., 2011; Pallant, 2013). A correlation co-efficient of +1 indicates that the two variables are perfectly related in a positive (linear) manner, a correlation co-efficient of -1 indicates that two variables are perfectly related in a negative (linear) manner, whilst a correlation co-efficient of zero indicates that there is no linear relationship between the two variables being studied (Cohen et al., 2011; Gogtay et al., 2017; Pallant, 2013). Perfect correlations of +1.00 or -1.00 rarely exist (Cohen et al., 2011).

For the purposes of this study, cut-off points of $r \geq 0.30$ (medium effect) and $r \geq 0.50$ (large effect) were used to determine the practical significance of correlation co-efficients (Cohen, 2011).

7.6.3 Inferential and Multivariate Statistical Analysis

Inferential and multivariate statistics were used to enable the researcher to draw inferences about the data. The latter methods allow a researcher to grasp conclusions that reach beyond the direct data (Cohen, 2011).

This stage comprised four steps, namely:

- (1) Conducting cluster analysis using k-means in order to determine which type combinations of occupational wellbeing could be distinguished based on the measurements of work engagement, burnout, workaholism and job satisfaction. This step involved testing research hypothesis 1.
- (2) Conducting multivariate tests (MANOVA) in order to determine if differences exist between the identified occupational wellbeing types (i.e. exhausted, engaged and burned out), and the psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence). This involved testing research hypothesis 2a.
- (3) Multinomial logistic regression analysis was conducted in order to determine whether the psychological antecedent variables (age, job demands, job resources and work-related sense of coherence) are able to predict the occupational wellbeing types. This involved testing research hypothesis 2b.

- (4) Multiple regression analysis was conducted in order to determine whether the occupational wellbeing types were able to predict the positive and negative outcome variables (organisational commitment and turnover intention). This involved testing research hypothesis 3a.
- (5) Multiple regression analysis was conducted in order to further determine whether the occupational wellbeing types differ significantly with regard to the positive outcome variables (organisational commitment and turnover intention). This involved testing research hypothesis 3b and 3c.
- (6) Hierarchical moderated regression analysis was conducted in order to determine if the psychological wellbeing types (exhausted, engaged and burned out) moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and the positive and negative outcome variables (organisational commitment and turnover intention), in order to draw conclusions regarding the nomological net of the identified occupational wellbeing types. This involved testing research hypothesis 4.

7.6.3.1 Cluster Analysis Using k-means

Cluster analysis using k-means was used to test research hypothesis 1:

H1: Four occupational wellbeing types will emerge parallel with the four quadrants of the circumplex model.

Cluster analysis is a type of data reduction technique which has the simple purpose of grouping cases, observations or variables of a given dataset into homogeneous groups that differ from each other (Yim & Ramdeen, 2015). This study used the *k*-means clustering technique, which belongs to the group of partitioning-based techniques (Morissette & Chartier, 2013). *K*-means clusters is one of the most popular clustering techniques and is a centroid-based method that identifies a specified number of non-overlapping clusters within data (Gan et al., 2007). This method requires the researcher to pre-specify the number of clusters and thereafter places each case into one of them (Bolin et al., 2014).

Bolin et al. (2014) reported the steps for k-means clustering as follows:

- (1) The researcher begins by specifying the number of clusters.
- (2) Initial cluster centroids are formed using random selection for the K-clusters, or through pre-specification of cluster centroids by the researcher.
- (3) The squared Euclidean distance (ESS) is calculated based on the current cluster solution.
- (4) Each individual is reassigned to the cluster to whose centroid it is closest.
- (5) The cluster centroids are updated after each reassignment.
- (6) Steps 3 to 5 are repeated until no further reassignment of individuals to clusters takes place, i.e., each individual is in the cluster with the nearest centroid.

7.6.3.2 Multivariate Analysis of Variance (MANOVA)

MANOVA was conducted in order to test research hypothesis 2a, and to subsequently test research hypothesis 3b and 3c:

H2a: The occupational wellbeing type combinations differ with regard to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence).

H3b: The occupational wellbeing type combinations differ significantly in relation to organisational commitment.

H3c: The occupational wellbeing type combinations differ significantly in relation to turnover intention.

Multivariate analysis of variance (MANOVA) is a statistical analysis used when a researcher wishes to examine the effects of one or more independent variable(s) on multiple dependent variables (Allen, 2017). MANOVA is an extension of the analysis of variance (ANOVA) technique, and is the most commonly used multivariate analysis technique (Allen, 2017). The goal with MANOVA is to maximally discriminate between two or more distinct groups on a linear combination of quantitative variables (Grice & Iwasaki, 2007).

MANOVA makes three primary assumptions (Maposa, Mudimu, & Ngwenya, 2010). The first and most important assumption in MANOVA is normality, which refers to the shape of the data distribution for an individual metric variable and its correspondence to the normal distribution, i.e. the benchmark for statistical methods (Maposa et al., 2010). The second assumption is that the covariance matrices for all

treatments must be equal. The third and final assumption is that the observations must be independent (Maposa et al., 2010). This assumption has a substantial impact on significance level and the power of a test.

Pillai's trace is a statistic tests used in MANOVA (Tabachnick & Fidell, 1996) and is regarded as the most powerful and robust statistic with general application. Pillai's trace is a positive-valued statistic ranging from 0 to 1. Increasing values means that effects are contributing more to the model (Tabachnick & Fidell, 1996). The general steps for calculating the test statistic are to first divide each eigenvalue by 1 plus the characteristic root, and to subsequently sum these ratios (Pillai, 1955). According to Tabachnick and Fidell (1996), MANOVA is particularly sensitive to outliers or extreme values on the dependent variable and the failure to exclude outliers or transform the data could inflate type I or II error rates.

7.6.3.3 Multinomial Logistic Regression Analysis

Multinomial logistic regression (MLR) analysis was conducted in order to test research hypothesis 2b:

H2b: The psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) significantly predict the occupational wellbeing types.

According to Wright (1995), logistic regression is powerful in its ability to estimate individual effects of continuous or categorical independent variables on categorical dependent variables. Multinomial logistic regression is employed when dependent variables involve three or more categories (Washington, Karlaftis, & Mannering, 2003), and is used to predict categorical placement in, or the probability of category membership on, a dependent variable based on multiple independent variables (Pedhazu, 1997). This method is an extension of binary logistic regression (Pedhazu, 1997). Like binary logistic regression, multinomial logistic regression uses maximum likelihood estimation to evaluate the probability of categorical membership (Pedhazu, 1997).

In as far as multinomial logistic regression is concerned, a reference category should be determined in order to make comparisons or analyses when applying to a model where dependent variables that have in excess of two categories. In this study, the engaged and burned out types were used as reference categories (Washington et al., 2003). In MLR studies, the (log) likelihood ratio statistic (often referred to as the -2log or deviance), and the Wald statistic are used in testing the significance of variables (Tabachnick et al., 2007). Tabachnick et al. (2001) argued that the multinomial logistic regression

technique has a number of major advantages as a summary to the aforementioned, in that it is more robust to violations of assumptions of multivariate normality and equal variance-covariance matrices across groups, and it is similar to linear regression, but a more easily interpretable diagnostic statistics.

In the context of this study, the psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) are regarded as the independent variables, and the occupational wellbeing types are regarded as the dependent variables. The use of MLR allows the researcher to determine whether the psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) are able to significantly predict the occupational wellbeing types.

7.6.3.4 Standard Multiple Regression Analysis

Standard multiple regression was conducted in order to test research hypothesis 3a:

H3a: The occupational wellbeing type combinations positively and significantly predict the positive and negative outcome variables (organisational commitment and turnover intention).

Standard multiple regression is the most commonly used multiple regression analysis method (Pallant, 2013). Regression analysis is performed for the purpose of determining the correlations between two or more variables having cause-affect relations, and to make predictions for the topic in applying the relation (Cohen et al., 2011; Uyanik & Güller, 2013). According to Cohen et al. (2011) regression analysis enables one to predict and weigh the relationship between independent and dependent variables. In addition to testing the predictive power of a set of variables, regression analysis can further be used to assess the relative contribution of each variable (Pallant, 2013). Ultimately, the objective of regression analysis is to predict the changes in the dependent variable as a result of a change in the independent variable (Cohen et al., 2011).

In the context of this study, the occupational wellbeing types are regarded as the independent variables, and the positive and negative outcomes (organisational commitment and turnover intention) are regarded as the dependent variables. The use of multiple regression should allow the researcher to test the models about precisely which set of variables actively influence organisational commitment and turnover intention by providing the direction and size of the effect of the independent variables

(occupational wellbeing type combinations) on the dependent variables (Cohen et al., 2011; Pallant, 2013).

7.6.3.5 Hierarchical Moderated Regression Analysis

Hierarchical Moderated Regression analysis was conducted in order to test research hypothesis 4.

H4: The occupational wellbeing types moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence), and the positive and negative outcome variables (organisational commitment and turnover intention), and conclusions can be drawn regarding the nomological net of the occupational wellbeing types.

According to Hayes (2018a), moderation analysis is used when a researcher is interested in determining if the magnitude of a variable effect on outcome variables of interest is dependent on a third variable or set of variables. In simple terms, a moderator variable affects the strength and/or direction of the relationship between an independent variable and a dependent variable. As a result, through moderation analysis, one is able to determine the conditions under which two variables are related (Chaplin, 2007), as opposed to causal links between variables.

According to Hair et al. (2014), in order to determine the presence and significance of a moderator effect, a three-step process is implemented, which follows hereunder:

- 1) The original (unmoderated) equation demonstrating the extent to which Y is predicted by X is estimated.
- 2) The moderated relationship (original equation plus moderator variable) is determined.
- 3) The change in R^2 is considered. The existence of a significant moderator affect is then confirmed if this change was statistically significant.

Generally, moderation can be tested by interacting variables of interest (moderator with IV) and plotting the simple slopes of the interaction, if present. However, in this study, bootstrapping was used. Mooney and Duval (1993) stated that bootstrapping is a non-parametric approach to effect-size estimation and hypothesis testing which does not assume the shape of the distributions of the variables or the sampling distribution. The appeal of this approach is that it can be confidently applied to samples. Bootstrapping is conducted by taking a large number of samples of size n (where n is the original sample size) from the

data, sampling with replacement, and computing the indirect effect, ab , of each sample. (Mooney & Duval, 1993)

In this study, moderation analysis was conducted using the PROCESS (v 3.0) macro for SPSS (Hayes, 2018a), and 5000 bootstrap samples using SPSS version 26.0 (model 1).

7.6.4 Statistical Level of Significance

Statistical analysis hinges on the notion of statistical significance (Cohen et al., 2011). The level of significance indicates the statistical significance in terms of specific probability (Bryman, 2016; Cohen et al., 2011). A researcher can make two errors, namely, Type I and Type II errors (Bryman, 2016). A Type I error may be explained as the rejection of a true null hypothesis, while a Type II error indicates the inability to reject a false null hypothesis (Cohen et al., 2011). For the purposes of this study, the statistical significance level of $p \leq 0.05$ (Cohen et al., 2011) was selected. This statistical significance level provides for a 95% level of confidence that the results will be accepted (Bryman, 2016; Cohen et al., 2011). In other words, this suggests that if a researcher were to draw 100 samples, that up to five samples may exhibit a relationship even when one does not exist (Bryman, 2016).

Table 7.9 below summaries the different levels of statistical significance.

Table 7.9
Different Levels of Statistical Significance (Tredoux & Durrehim, 2013)

Probability	Level	Significance
P	0.10	Less significant
P	0.01 to 0.05	Significant
P	0.001 to 0.01	Very significant
P	0.001	Extremely significant

7.7 SUMMARY

This chapter discussed the first six steps of the empirical investigation, which included the determination and description of the sample, choice of psychometric battery, the administration and scoring of the psychometric battery, the formulation of the research hypotheses, and finally, the statistical procedures that will be utilised for the processing of the data and assessing whether the content is also appropriate. Chapter 8 addresses empirical research aims 1 to 5, as outlined in Table 7.8.

CHAPTER 8 RESEARCH RESULTS

This chapter discusses the results of the different statistical analyses, which were carried out with the aim of testing the hypotheses formulated for the purposes of this research study. Steps 7 and 8 of the empirical investigations will be discussed. The results of the empirical research will be further presented by means of tables and figures. Descriptive statistics, correlations and inferential statistics were applied to achieve the research objectives. The empirical findings are integrated with the literature review to in order to substantiate and validate what has emerged from the statistical analyses. The chapter begins by discussing the validity, reliability and descriptive statistics of the measuring instruments and thereafter follows discussion of the correlational and inferential (multivariate) techniques).

8.1 VALIDITY AND RELIABILITY OF THE MEASURING INSTRUMENTS

Confirmatory factor analysis (CFA) and Exploratory factor analysis (EFA) was carried out to determine the validity of the scales. Cronbach alpha coefficients were calculated to determine the reliability of each scale.

8.1.1 Burnout Scale

8.1.1.1 Confirmatory Factor Analysis of the Burnout Scale

Construct validity was determined by conducting a confirmatory factor analysis on all 17 items and the associated three dimensions (emotional exhaustion consisting of 6 items, fatigue consisting of 5 items and cognitive weariness consisting of 6 items). The results are displayed in Table 8.4 below.

Table 8.1
Confirmatory Factor Analysis: Construct Validity of Burnout scale

Measurement Instrument	Confirmatory Factor Analysis (CFA)
Burnout	Chi-square = 1386.04***/df=116
Construct factors:	SRMR = 0.13
Cognitive weariness	RMSEA = 0.15
Emotional exhaustion	CFI = 0.75
Fatigue	NNI = 0.70
	AIC = 1460.0410

As can be seen from Table 8.4, the results did not indicate a good fit as the SRMR was not below 0.05; RMSEA not between 0.05 and 0.08; CFI not above 0.95 and NNI not between 0.90 and 0.95.

Due to the fact that the three-factor solution did not yield a good fit, exploratory factor analysis was subsequently carried out to confirm the factor structure of the scale.

8.1.1.2 Exploratory Factor Analysis of the Burnout Scale

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.86) was above the recommended threshold of 0.5 and the Bartlett's Test of Sphericity was significant ($p=0.000$), and therefore indicate that exploratory factor analysis was appropriate for this dataset. The analysis identified three factors, based on the Kaiser's eigenvalue criterion of eigenvalues greater than one, which explained 65.5% of the variance. The percentage variation explained was 43.1%, 13.3% and 9.1% for the three factors, respectively. The results are displayed in Table 8.5 below.

Table 8.2
Factor loadings for Burnout scale

Item No	Item	Factors		
		Cognitive weariness	Emotional exhaustion	Fatigue
B1	I do not think clearly while at work			0.62
B2	I cannot concentrate while at work			0.65
B3	I struggle to process problems quickly		0.64	
B4	I find it difficult to learn new things on my job		0.78	
B5	I find it difficult to think about complex things while at work		0.87	
B6	I am not focused while working		0.51	
B7	I feel weak while at work			0.58
B8	I do not have enough energy to carry out my daily tasks			0.52
B9	I do not have the energy to go to work in the morning			0.53
B10	I feel exhausted at the end of a working day			0.66
B11	I feel emotionally exhausted at work	0.48		0.55
B12	I do not feel like building relationships with my co-workers	0.94		
B13	I lack the energy to build relationships with people at work	0.83		
B14	I feel I am less connected to my work	0.57		
B15	I am unable to imagine the feelings of my co-workers	0.70		
B16	I am not emotionally affected by how other people at work feel	0.52		
B17	I am not excited about my job	0.56		

From Table 8.5 above, which indicated the factor loadings, it can be seen that items B1 and B2 loaded with Fatigue instead of Cognitive weariness as per the original design of the measuring instrument but showed no other cross-loadings. Item B11 was cross-loading to some extent, but it loaded higher on the primary factor (Fatigue). It was therefore decided to retain these three items within the factor structure as displayed above.

8.1.1.3 Reliability of the Burnout Scale

Table 8.6 below indicates the Cronbach's Alpha coefficient values for each of the three subscales and the total burnout scale.

Table 8.3

Cronbach's Alpha coefficient: Burnout scale (n=461)

Subscale	No of items	Cronbach's Alpha coefficient
Burnout	17	0.91
Emotional exhaustion	6	0.87
Fatigue	7	0.86
Cognitive weariness	4	0.83

As indicated above in Table 8.6, the dimensions showed high reliabilities. The Cronbach's alpha coefficient for the total scale was 0.91 whilst the sub-scale coefficients were as follows: emotional exhaustion, 0.87; 0.86 for fatigue and 0.83 cognitive weariness, which meets the criterion of 0.70 according to the guideline of Nunnally and Bernstein (1994).

8.1.1.4 Integration and Discussion: Validity and Reliability of the Burnout Scale

Regarding the validity of the burnout scale, there have not been many studies, to the researcher's knowledge, that have used this scale. This study found a three-factor structure for the scale and confirms the original three-factor structure i.e. cognitive weariness, fatigue and emotional exhaustion as found by Asiwe et al. (2014). It is however important to note that this study only confirms this structure to a certain degree, as all items of the scale did not load as they are intended to. It can however be argued that this is acceptable as the dimensions may be theoretically overlapping. In developing the burnout scale, Asiwe et al. (2014) reported that fatigue correlated practically and significantly with cognitive weariness ($r = 0.56$, large effect) and emotional exhaustion or withdrawal ($r = 0.49$, large effect), whilst emotional exhaustion or withdrawal was significantly and practically related to cognitive weariness ($r = 0.63$, large effect). The correlation between the three factors, could lead to individual items moving between the factors, which could have resulted in why the items in this scale did not load as they are intended to. A study by Van der Westhuizen and Bezuidenhout (2017) further confirmed the three-factor structure of this scale. According to Asiwe et al. (2014), this three-factor structure finding is similar to that of other burnout inventories, such as the Maslach Burnout Inventory, thereby yielding its validity.

In terms of reliability, all three factors of the scale in this study obtained scores in the acceptable range, again in line with findings by Asiwe et al. (2014) who reported reliability scores of 0.88 for cognitive weariness, 0.85 for fatigue and 0.82 for emotional exhaustion. Similarly, Van der Westhuizen and Bezuidenhout (2017) reported reliability scores of 0.88 for cognitive weariness, 0.85 for fatigue, 0.86 for emotional exhaustion, and 0.93 for the total BS.

Based on the above discussion, enough evidence was found to consider the burnout scale as a valid and reliable measuring instrument, and it was therefore used to determine burnout levels of healthcare workers in this study.

8.1.2 Work Engagement Scale (UWES)

8.1.2.1 Confirmatory Factor Analysis of the UWES

Construct validity was determined by conducting a confirmatory factor analysis on all 9 items and the associated three dimensions (vigour consisting of 3 items, dedication consisting of 3 items and absorption consisting of 3 items). The results are displayed in Table 8.1 below.

Table 8.4

Confirmatory Factor Analysis: Construct Validity of UWES

Measurement Instrument	Confirmatory Factor Analysis (CFA)
Work engagement (WE)	Chi-square = 223.92***/ df= 24
Construct factors:	SRMR = 0.07
Absorption	RMSEA = 0.13
Dedication	CFI = 0.91
Vigour	NNI = 0.86
	AIC = 265.9181

Table 8.4 above illustrates that the results did not indicate a good fit as the SRMR was not below 0.05; RMSEA not between 0.05 and 0.08; CFI not above 0.95 and NNI not between 0.90 and 0.95.

Since the three-factor solution did not yield a good fit, exploratory factor analysis was subsequently carried out.

8.1.2.2 Exploratory Factor Analysis of the UWES

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.89) was above the recommended threshold of 0.5 and the Bartlett's Test of Sphericity was significant ($p=0.000$), and therefore indicate that exploratory

factor analysis was appropriate for this dataset. The analysis identified only one factor, based on the Kaiser’s eigenvalue criterion of eigenvalues greater than one, which explained 54.8% of the variance. The results are displayed in Table 8.2 below.

Table 8.5
Factor loadings for UWES

Item No	Item	Factor One Factor
WE1	At my work, I feel bursting with energy	0.60
WE2	At my job, I feel strong and vigorous	0.74
WE3	I am enthusiastic about my job	0.83
WE4	My job inspires me	0.78
WE5	When I get up in the morning, I feel like going to work	0.68
WE6	I feel happy when I am working intensely	0.77
WE7	I am proud of the work that I do	0.72
WE8	I am immersed in my work	0.74
WE9	I get carried away when I am working	0.39

As can be seen from Table 8.2, item WE9 was loading relatively low (0.39). It was however decided to retain this item for subsequent analysis as it formed a part of the shortened version of the scale. This shortened version of the scale was validated by Schaufeli et al. (2006) who achieved this putting together a data base of 27 studies that was carried out over a five-year period and spanned across ten different countries.

8.1.2.3 Reliability of the UWES

Table 8.3 below indicates that the Cronbach’s Alpha coefficient value for the work engagement scale.

Table 8.6
Cronbach’s Alpha coefficient: UWES (n=461)

Scale	No of items	Cronbach’s Alpha coefficient
Work engagement	9	0.88

The Cronbach’s alpha coefficient for the work engagement scale was 0.88 for the total sample (n=461) which meets the criterion of 0.70 according to the guideline of Nunnally and Bernstein (1994).

8.1.2.4 Integration and Discussion: Validity and Reliability of UWES

The findings of this study with reference to validity, confirmed a one-factor structure for the UWES. Previous studies by Schaufeli et al. (2002), Balducci et al. (2010), Hernández Vargas (2016) and Tayama

et al. (2018) have all confirmed a three factor structure of the scale, specifically the shortened version. In other words, these studies found that vigour, dedication, and absorption are satisfactorily explained by a solution with three related factors. However, the one-factor structure in this research, correlates with previous research on the shortened version of the scale by Halberg and Schaufeli (2006); Schaufeli and Bakker (2003); and Shimazu et al. (2008). These studies, in line with this study, opted to use the total score on the UWES as a measure of work engagement (i.e. all the items were constrained to load on one underlying factor). With reference to the South African context, Sonnentag (2003) found support for a one-factor solution for the UWES; Storm and Rothmann (2003) also reported a one factor model with four items deleted (3, 11, 15 and 16) in a study in the South African Police Service and more recently, Rothmann, Jorgensen, and Marais (2011), confirmed that, after performing a principal components analysis and factor analysis and inspecting eigen values, one single factor could be extracted. Similarly, De Bruin, Hill, Henn, and Muller (2013) confirmed fit statistics for the UWES for the scale as a whole (i.e. by treating all items of the scale as a unidimensional attribute).

In terms of the reliability of the scale, in line with this study, Sonnentag (2003), Storm and Rothmann (2003), Rothmann (2011) and Camona-Halty, Schaufeli, and Salanova (2019) have confirmed the high internal consistency of the scale.

Based on the above discussion, sufficient evidence was found to consider the work engagement scale as a valid and reliable measuring instrument, and it was therefore used to determine engagement levels of healthcare workers in this study.

8.1.3 Workaholism Scale (DUWAS)

8.1.3.1 Confirmatory Factor Analysis of the DUWAS

Construct validity was determined firstly by carrying out a confirmatory factor analysis and the associated two dimensions (working excessively and working compulsively). Table 8.7 below reports on the results.

Table 8.7

Confirmatory Factor Analysis: Construct Validity of DUWAS

Measurement Instrument	Confirmatory Factor Analysis (CFA)
Workaholism	Chi-square = 498.68/df=34
Construct factors:	SRMR = 0.11
Working excessively	RMSEA = 0.17
Working compulsively	CFI = 0.58
	NNI = 0.45
	AIC = 540.6756

As can be seen from table 8.7, the fit was not deemed acceptable as the SRMR was not below 0.05; RMSEA not between 0.05 and 0.08; CFI not above 0.95 and NNI not within the threshold of 0.90 and 0.95.

A subsequent exploratory factor analysis was carried which revealed a four-factor structure, which did not fit in with previous studies or make sense theoretically. Forcing a two-factor or one-factor structure was then considered as this aligned with theory. However, neither of these factor solutions explained enough variance. Due to the fact that the scale plays an integral role in determining occupational wellbeing types, it was therefore not feasible to delete it from subsequent analysis. A decision was therefore made to apply a modification to the confirmatory factor analysis model.

In the modified model, construct validity was determined by carrying out the confirmatory factor analysis on 6 out of the original 10 items and the associated constructs (working excessively and working compulsively). Items W1 and W2 (working excessively) and items W3 and W10 (working compulsively) were dropped. The results of the modified CFA model are reported on below in Table 8.8.

Table 8.8

Confirmatory Factor Analysis: Construct Validity of DUWAS

Measurement Instrument	Confirmatory Factor Analysis (CFA)
Workaholism	Chi-square = 19.22/df=6
Construct factors:	SRMR = 0.03
Working excessively	RMSEA = 0.07
Working compulsively	CFI = 0.97
	NNI = 0.92
	AIC = 49.2204

As can be seen from Table 8.8 above, the results of the modified CFA model indicated a fit that was acceptable with SRMR below 0.05; RMSEA between 0.05 and 0.08; CFI above 0.95 and NNI within the threshold of 0.90 and 0.95.

The reliability of the devised Workaholism scale will be reported on next.

8.1.3.2 Reliability of the DUWAS

Table 8.9 below indicates the Cronbach's Alpha co-efficient values for the workaholism scale.

Table 8.9

Cronbach's Alpha co-efficient of DUWAS (n=461)

Scale	No of items	Cronbach's Alpha coefficient
Workaholism	6	0.69
Working Compulsively	3	0.51
Working Excessively	3	0.59

The Cronbach's alpha co-efficient for the total workaholism scale was 0.69 for the total sample (n=461), and 0.51 for the working compulsively dimension and 0.59 for the working excessively dimension. Andreassen et al. (2011) similarly found lower Cronbach's alphas for the subscales of the scale in their study with 0.69 for working excessively and 0.63 for working compulsively. The reliability scores for the sub-scales do not comply with the cut-off requirement of 0.70 (Nunnally & Bernstein, 1994). However, in subsequent analysis, only the total scale score ($\alpha = 0.69$) will be used, which is only marginally lower than the acceptable cut-off.

8.1.3.3 Integration and Discussion: Validity and Reliability of DUWAS

The results relating to validity of the DUWAS in this study confirmed a two-factor structure of the DUWAS. To a certain extent, the two-factor structure found in this study, confirms the factor structure as found by De Líbano et al. (2010) and Horn (2015). The similarity of the factor structure of the three studies lies in the fact that all the items from the scale loaded on one of two factors, working compulsively or working excessively. It is however important to note that what differs in the current study, is that certain items (W1, W2, W3 and W10) were dropped, and therefore this study did not show support for exactly the same two factor item loadings as De Líbano et al. (2010) and Horn (2015). A previous study by Molino, Ghislieri, and Colombo (2019) found support for a one-factor structure of the scale. Molino et al. (2019) used 5 items from the original 10-item scale and confirmed a one-factor solution was a good fit for their data.

The reliabilities for the total scale and subscales i.e. working compulsively and working excessively, were lower in this study when compared to previous studies. De Líbano et al. (2010) and Schaufeli et al. (2009) reported reliabilities ranging between 0.70 to 0.85 for the total scale and subscales. Andreassen (2014)

reported Cronbach’s alphas of 0.78 for working excessively and 0.73 for working compulsively and a Cronbach’s alpha of over 0.80 for the total scale. Kamal (2017) reported reliabilities for the total scale of 0.71, 0.66 for working excessively and 0.64 for working compulsively. The current study found that the overall reliability of the scale was slightly lower than the required cut-off of 0.70, (Nunnally & Bernstein, 1994), with a coefficient of 0.69. According to Hinton, Brownlow, McMuaary, and Cozens (2004), there has been a debate among researchers as to where the appropriate cut-off points should be with regard to reliability, and a range of 0.50 to 0.70 may be considerate as moderate reliability. However, the researcher notes that in the field of Industrial Psychology, the cut-off value of 0.70 is considered as reliable, in line with the guideline provided by Nunnally and Bernstein (1994), and therefore, the findings of this scale should be interpreted with caution.

The above discussion shows the validity and reliability results for the DUWAS are not ideal. The decision was however made to proceed with the use of the scale and the interpretation of results for this scale should be done with caution.

8.1.4 Job Satisfaction Scale (JSS)

The Job Satisfaction scale comprises of only one dimension, therefore rendering both confirmatory and exploratory factor analysis unnecessary.

The reliability of the scale is discussed below.

8.1.4.1 Reliability of the JSS

The Cronbach’s Alpha coefficient values for the Job Satisfaction scale is depicted in Table 8.10 below.

Table 8.10

Cronbach’s Alpha co-efficient of JSS (n=461)

Scale	No of factors	Cronbach’s Alpha coefficient
Job Satisfaction	3	0.65

Table 8.10 above indicated that the Cronbach’s alpha coefficient for the job satisfaction scale was 0.65 for the total sample (n=461), which whilst slightly lower than the required cut-off of 0.70 (Nunnally & Bernstein, 1994), was retained for the purposes of this study.

8.1.4.2 Discussion: Reliability of JSS

Previous studies by Diedricks (2012) and Rothmann (2010) reported higher Cronbach's alpha coefficient for the JSS of 0.84. In the current study, the JSS did not produce an adequate reliability score. However, it was retained for the purposes of this study and that all subsequent analysis should be interpreted with caution. It should however be noted that Hinton et al. (2004) reported that cut-off's with reliability have been a topic of debate amongst researchers, and a range of 0.50 to 0.70 may be considered as moderate reliability.

8.1.5 The Job Demands-Resources Scale (JDRS)

8.1.5.1 Confirmatory Factor Analysis of the JDRS

Construct validity was determined by conducting a confirmatory factor analysis on all 25 items and the associated two dimensions (job demands comprising of 9 items and job resources comprising of 16 items). The results are displayed in Table 8.11 below.

Table 8.11

Confirmatory Factor Analysis: Construct Validity of JDRS

Measurement Instrument	Confirmatory Factor Analysis (CFA)
Job Demands-Resources	Chi-square = 3564.24**/df=274
Construct factors:	SRMR = 0.15
Job Demands	RMSEA = 0.16
Job Resources	CFI = 0.32
	NNI = 0.25
	AIC = 3666.2499

Table 8.11 above illustrates that the results did not indicate a good fit as the SRMR was not below 0.05; RMSEA not between 0.05 and 0.08; CFI not above 0.95 and NNI not between 0.90 and 0.95.

Since the two-factor solution did not yield a good fit, exploratory factor analysis was subsequently carried out.

8.1.5.2 Exploratory Factor Analysis of the JDRS

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.71) was above the recommended threshold of 0.5 and the Bartlett's Test of Sphericity was significant ($p=0.000$), this therefore indicates that exploratory factor analysis was appropriate for this dataset. The analysis identified seven factors, based on the Kaiser's

eigenvalue criterion of eigenvalues greater than one, which explained 65.9% of the variance. The percentage variation explained was 18.4% for task overload, 13.4% for emotional overload, 10.4% for social support, 9.0% for insecurity, 5.6% for compensation, 5.0% for growth opportunities and 4.2% for role clarity. The results are displayed in Table 8.12 below.

Table 8.12
Factor loadings of JDRS

Item No	Item	Factors						
		Task Overload	Emotional Overload	Social Support	Insecurity	Comp.	Growth Opp.	Role Clarity
JDR1	Do you have too much work to do?					0.68		
JDR2	Do you work under time pressure?					0.81		
JDR3	Do you have to be attentive to many things at the same time?					0.52		
JDR4	Are you confronted at work with things that affect you personally?				0.44			
JDR5	Do you have contact with difficult people in your work?				0.72			
JDR6	Does your job put you in emotionally upsetting situations?				0.73			
JDR7	Can you count on your colleagues when you come across difficulties in your work?	0.41						
JDR8	If necessary, can you ask your colleagues for help?	0.48						
JDR9	Do you get on well with your colleagues?	0.57						
JDR10	Can you count on your supervisor when you come across difficulties?	0.87						
JDR11	Do you get on well with your supervisors?	0.70						
JDR12	In your work, do you feel appreciated by your supervisor?	0.43						
JDR13	Do you know exactly what other people expect of you in your work?							0.42
JDR15	Do you know exactly what your direct supervisor thinks of your performance?							0.88
JDR16	Can you discuss work problems with your direct supervisor?	0.41						
JDR17	Do you need to be more secure that you will still be working for the organisation in one year's time?				-0.71			
JDR18	Do you need to be more secure that you will keep your current job in the next year?				-0.97			



JDR19	Do you need to be more secure that next year you will keep the same function level as currently?	-0.79	
JDR20	Do you think that your organisation pays good salaries?	-0.62	
JDR21	Can you live comfortably on your pay?	-0.77	
JDR22	Do you think you are paid enough for the work that you do?	-0.95	
JDR23	Does your job offer you the possibility to progress financially?	-0.49	0.43
JDR24	Does your organisation give you opportunities to follow training courses?		0.69
JDR25	Does your job give you the opportunity to be promoted?		0.51

It was decided in this study to exclude item 14 as it was loading too low (0.39 on Task Overload) in comparison to the other items in the scale. In addition, item 23, which should have loaded with compensation, loaded with both emotional overload and growth opportunities instead. It was therefore decided to discard item 23 in subsequent analysis.

8.1.5.3 Reliability of the JDRS

Table 8.13 below indicates that the Cronbach's Alpha coefficient values for the job demands-resources scale.

Table 8.13
Cronbach's Alpha co-efficient for JDRS (n=461)

Scale	No of items	Cronbach's Alpha coefficient
Job Demands-Resources	25	0.71
Task Overload	3	0.72
Emotional Overload	3	0.65
Social Support	7	0.76
Insecurity	3	0.86
Compensation	4	0.85
Growth Opportunities	2	0.66
Role Clarity	2	0.57

The Cronbach's alpha coefficient for the job demands-resources scale was 0.71 for the total sample (n=461). The subscale coefficients were 0.72 for task overload; 0.65 for emotional overload; 0.76 social support; 0.86 for insecurity; 0.85 for compensation; 0.66 for growth opportunities and 0.57 for role clarity. Three of the factors (emotional overload, growth opportunities and role clarity) Cronbach's were

relatively low, below the criterion of 0.70 (Nunnally & Bernstein, 1994) as very few of the items loaded onto each factor.

The decision was therefore made to proceed with only the subscales that reported acceptable reliabilities in subsequent analysis. As a result, task overload (0.72) and insecurity (0.86) combined to form job demands, whilst social support (0.76) and compensation (0.85) combined to form job resources.

8.1.5.4 Integration and discussion: validity and reliability of JDRS

Results from this study pertaining to validity, originally confirmed a seven-factor structure for the JDRS. This seven-factor structure in this research, correlates with previous studies by Jackson and Rothmann (2005), who confirmed organisational support, growth opportunities, overload, job insecurity, relationships with colleagues, control and rewards. Van der Westhuizen and Bezuidenhout (2017) provided further evidence for a seven-factor structure of the scale which comprised of organisational support, growth opportunities, overload, job insecurity, relationship with colleagues, control and rewards. After dropping the dimensions with lower reliabilities, this study's four factor structure for the JDRS resembles that of Barkhuizen and Rothmann (2008) who also found four reliable factors, namely; overload (0.70), growth and advancement (0.85), structure and relationships (0.92) and job insecurity (0.90).

Studies Jackson and Rothmann (2006) and Main (2012), however confirmed a six-factor structure, excluding the rewards/compensation dimension. A study by Rothmann, Mostert, and Strydom (2005), on the other hand, confirmed a five-factor structure comprising of growth opportunities, organisational support, role clarity, social support, financial rewards and advancement.

In terms of the reliability of the scale, it was concluded that the Cronbach's alpha coefficient for the overall scale was low. In terms of the individual dimensions, the coefficient's for emotional overload, growth opportunities and role clarity were low; and it was therefore decided to exclude these dimensions from subsequent analysis. Acceptable reliabilities were found for task overload and social support, and high reliabilities for insecurity and compensation. Previous studies by Rothmann et al. (2005) reported Cronbach's alpha coefficients of 0.76 to 0.92 and Main (2012) who reported coefficients similar to this study as they ranged between 0.57 to 0.90.

Based on the above discussion, it can be concluded that once the dimensions with low reliabilities were dropped, enough evidence was found to consider the JDRS as a valid measuring instrument. Against this, the JDRS was used to determine participants perceptions regarding the job demands placed on healthcare workers and job resources available to them in this study.

8.1.6 The Work-Sense of Coherence (Work-SOC) Scale

8.1.6.1 Confirmatory Factor Analysis of the Work-SoC Scale

Construct validity was determined by conducting a confirmatory factor analysis on all 9 items and the associated three constructs (comprehensibility comprising of 4 items and manageability comprising of 2 items and meaningfulness comprising of 3 items). The results are displayed in Table 8.14 below.

Table 8.14
Confirmatory Factor Analysis: Construct Validity of Work-SoC

Measurement Instrument	Confirmatory Factor Analysis (CFA)
Work-Sense of Coherence	Chi-square = 549.420*/df=24
Construct factors:	SRMR = 0.10
Comprehensibility	RMSEA = 0.22
Manageability	CFI = 0.81
Meaningfulness	NNI = 0.71
	AIC = 591.4204

Table 8.14 above illustrates that the results did not indicate a good fit as the SRMR was not below 0.05; RMSEA not between 0.05 and 0.08; CFI not above 0.95 and NNI not between 0.90 and 0.95.

Since the three-factor solution did not yield a good fit, exploratory factor analysis was subsequently carried out, with a one-factor solution.

8.1.6.2 Exploratory Factor Analysis of the Work-SoC Scale

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.82) was above the recommended threshold of 0.5 and the Bartlett's Test of Sphericity was significant ($p=0.000$), thereby indicating that the exploratory factor analysis was appropriate for this dataset. The analysis identified one factor, based on the Kaiser's eigenvalue criterion of eigenvalues greater than one, which explained 54.6% of the variance. The results are displayed in Table 8.15 below.

The items on the Work-SoC scale were rated on a continuum.

Table 8.15

Factor loadings for Work-SoC

Item No	Item	Factors
		One-Factor
WSCOC1	Manageable – Unamenable	0.75
WSOC2	Meaningful-Meaningless	0.72
WSOC3	Structured – Unstructured	0.76
WSOC4	Easy to influence – Impossible to influence	0.70
WSOC5	Significant – Insignificant	0.53
WSOC6	Clear – Unclear	0.89
WSOC7	Controllable – Uncontrollable	0.85
WSOC8	Rewarding – Unrewarding	0.47
WSOC9	Predictable – Unpredictable	0.57

As can be seen from Table 8.15 above, all nine items loaded with reasonable fit with the one-factor structure.

8.1.6.3 Reliability of the Work-SoC Scale

Table 8.16 below illustrates the Cronbach's Alpha coefficient values for the work-sense of coherence scale.

Table 8.16

Cronbach's Alpha co-efficient of Work-SoC (n=461)

Scale	No of items	Cronbach's Alpha Coefficient
Work-Sense of Coherence	9	0.88

The internal consistency coefficient for the work-sense of coherence scale was 0.88 for the total sample (n=461) which is considered adequate for the purposes of this study.

8.1.6.4 Integration and Discussion: Validity and Reliability of Work-SoC Scale

In terms of validity, this study found that a one-factor structure fitted the data better than the three-factor structure that was found in previous studies. Zweber (2014) as well as Van der Westhuizen and Ramasodi (2016) found that the original three-factor structure fitted the data better than a one-factor structure. Similarly, Vogt et al. (2012); Vogt et al. (2013); and Bauer (2015) also confirmed the original three-factor structure of the instrument. Grødal et al. (2018) stated that loading all nine items of the Work-SoC scale, is in line with the recommendation of using a composite Work-SoC score.

In terms of reliability, it was concluded that the scale produced a reliability score that was acceptable, and the scale could therefore be considered as reliable. The reliability of the instrument was further confirmed in studies by Vogt et al. (2012); Vogt et al. (2013); Zweber (2014); Bauer et al. (2015) and Van der Westhuizen and Ramasodi (2016) who all reported reliabilities between 0.83 and 0.93.

Based on the above discussion, enough evidence was found to consider the Work-SoC scale as a valid and reliable measuring instrument, and it was therefore used to determine work-sense of coherence levels of healthcare workers in this study.

8.1.7 The Organisational Commitment Scale (OCS)

8.1.7.1 Confirmatory Factor Analysis of the OCS

Construct validity was determined by conducting a confirmatory factor analysis on all 18 items and the associated three constructs (affective commitment comprising of 6 items; continuance commitment comprising of 6 items and normative commitment comprising of 6 items). The results are displayed in Table 8.17 below.

Table 8.17

Confirmatory Factor Analysis: Construct Validity of Organisational Commitment

Measurement Instrument	Confirmatory Factor Analysis (CFA)
Organisational Commitment	Chi-square = 1607.316*/df=132
Construct factors:	SRMR = 0.13
Affective Commitment	RMSEA = 0.16
Continuance Commitment	CFI = 0.68
Normative Commitment	NNI = 0.63
	AIC = 591.4204

Table 8.17 above illustrates that the results did not indicate a good fit as the SRMR was not below 0.05; RMSEA not between 0.05 and 0.08; CFI not above 0.95 and NNI not between 0.90 and 0.95.

Since the original three-factor solution did not yield a good fit, exploratory factor analysis was subsequently carried out.

8.1.7.2 Exploratory Factor Analysis of the OCS

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.82) was above the recommended threshold of 0.5 and the Bartlett's Test of Sphericity was significant ($p=0.000$), and therefore indicate that exploratory

factor analysis was appropriate for this dataset. The analysis identified three factors, based on the Kaiser's eigenvalue criterion of eigenvalues greater than one, which explained 65.1% of the variance. The percentage variation explained was 36.6%, 18.7% and 9.8% for the three factors, respectively. The results are displayed in Table 8.18 below.

Table 8.18
Factor loadings for Organisational Commitment

Item No	Item	Factors		
		Normative Commitment	Continuance Commitment	Affective Commitment
OC3	I do not feel a strong sense of "belonging" to my organisation			0.76
OC4	I do not feel "emotionally" attached to this organisation			0.71
OC5	I do not feel like "part of the family" at my organisation			0.61
OC6	The organisation has a great deal of personal meaning for me	0.58		
OC7	Right now, staying with my organisation is a matter of necessity as much as desire		-0.67	
OC8	It would be very hard for me to leave my organisation right now, even if I wanted to		-0.75	
OC9	Too much of my life would be disrupted if I decided I wanted to leave my organisation now		-0.67	
OC10	I feel that I have too few options to consider leaving this organisation		-0.81	
OC11	If I had not already put so much of myself into this organisation, I might consider working elsewhere		-0.38	
OC12	One of the few negative consequences of leaving this organisation would be the scarcity of available alternatives		-0.63	
OC14	Even if it were to my advantage, I do not feel it would be right to leave my organisation now	0.72		
OC15	I would feel guilty if I left my organisation now	0.90		
OC16	This organisation deserves my loyalty	0.83		
OC17	I would not leave my organisation right now because I have a sense of obligation to the people in it	0.90		
OC18	I owe a great deal to my organisation	0.88		

For the purposes of this study, it was decided to exclude items OC1, OC2 and OC13. With the initial factor analysis that was run which found a four-factor structure, item OC1 and OC 13 were cross loading and item OC2 was loading high on its own (0.57) on factor 4. It was therefore decided to exclude these three items and re-run the factor analysis. Item OC6 loaded on normative commitment and not affective commitment, however, this could be owing to the fact that this item is positively stated, while the other items from the affective commitment sub-scale are negatively stated.

8.1.7.3 Reliability of the OCS

Table 8.19 below indicates the Cronbach's Alpha coefficient values for the organisational commitment scale.

Table 8.19

Cronbach's Alpha co-efficient Organisational Commitment Scale (n=461)

Scale	No of items	Cronbach's Alpha Coefficient
Organisational Commitment	18	0.83
Continuance Commitment	6	0.92
Normative Commitment	6	0.82
Affective Commitment	3	0.74

The internal consistency for the organisational commitment scale was 0.83, and the subscales Cronbach's alpha coefficients were; continuance commitment (0.92), normative commitment (0.82) and affective commitment (0.74) respectively. These findings suggest that the organisational commitment scale is reliable for the purposes of this study.

8.1.7.4 Integration and Discussion: Validity and Reliability of OCS

In terms of the validity of the scale, the three-factor structure found in this study agrees with previous studies. Bagraim (2003); Masqod, Hanif, Rehman, and Glenn (2012); Akoto and Akoto (2014) and Meyer and Allen (1997) all found and confirmed three-factor structures.

Regarding the reliability of the scale, it was concluded that the total scale and its respective dimensions are reliable. Masqood et al. (2012) reported Cronbach's alpha coefficients of 0.61 to 0.84 thereby indicating a moderate to high magnitude of reliability. Akoto and Akoto (2014) reported Cronbach's alpha coefficients for the total scale and its respective dimensions all above 0.70, indicating an acceptable level of reliability; and Meyer and Allen (1997) reported Cronbach's alpha coefficients between 0.73 and 0.85 for the total scale and its respective dimensions.

Based on the above discussion, enough evidence was found to consider the organisational commitment scale as a valid and reliable measuring instrument, and it was therefore used to determine commitment levels of healthcare workers in this study.

8.1.8 Turnover Intention Scale (TIS-6)

The Turnover Intention scale comprises of only one dimension, therefore rendering both confirmatory and exploratory factor analysis unnecessary. The reliability of the scale is discussed below.

8.1.8.1 Reliability of the TIS-6

The Cronbach's Alpha co-efficient values for the Turnover Intention scale is depicted in Table 8.20 below.

Table 8.20

Cronbach's Alpha co-efficient of TIS-6 (n=461)

Scale	No of factors	Cronbach's Alpha Coefficient
Turnover Intention	6	0.66

Table 8.20 above indicated that the internal consistency coefficient for the job satisfaction scale was 0.66 for the total sample (n=461). Although this score is not completely adequate, when compared against the required cut-off of 0.70 (Taber, 2017), it was decided to retain the scale. Subsequent results should be interpreted with caution.

8.1.8.2 Discussion: Reliability of the TIS-6

The Cronbach's alpha coefficient for the TIS-6 was lower when compared to previous studies for this shortened version of the scale. Martin and Roodt (2008) reported a high Cronbach's alpha coefficient of 0.91, as did Bothma and Roodt (2013) who reported 0.80 and Oosthuizen and Munro (2016) who reported 0.88.

Despite the lower Cronbach's alpha found in this study, it was decided to retain the scale for further analysis. As previously stated, Hinton et al. (2004), reported that there has long existed a debate among researchers as to where the appropriate cut-off points should be with regard to reliability, and a range of 0.50 to 0.70 may be considerate as moderate reliability. In line with this, the researcher opted to continue with the use of the scale. However, the researcher notes that in the field of Industrial Psychology, the cut-off value of 0.70 is considered as reliable, in line with the guideline provided by Nunnally and Bernstein (1994), and therefore, the findings of this scale should be interpreted with caution.

Based on the above discussion, the TIS-6 is viewed as a valid and relatively reliable measuring instrument in this study, and it was therefore used to determine turnover intention levels of healthcare workers in this study.

8.2 Descriptive Statistical Analysis of the Measurement Constructs

The section below presents the descriptive statistics in this research which are included to illuminate the inferential statistical analysis which is subsequently reported on. Data on the item descriptives are reported on.

The results for the means, standard deviations, skewness and kurtosis of the Burnout Scale, Work Engagement Scale, Workaholism Scale, Job Satisfaction Scale, Job Demands-Resources Scale, Work-SoC Scale, Organisational Commitment Scale and Turnover Intention Scale are summarised in Table 8.21 below.

Table 8.21

Descriptive Statistics: Mean Scores, Standard Deviations, Skewness and Kurtosis for the Eight Scales

Variables	Mean	Std. Deviation	Skewness	Kurtosis
Work Engagement				
Total Scale	4.71	0.87	-1.32	3.71
Burnout Scale				
Total Scale	0.99	0.76	0.96	2.04
Cognitive Weariness	0.90	0.94	0.78	-0.34
Emotional Exhaustion	0.66	0.76	1.92	7.31
Fatigue	0.99	0.76	0.96	2.04
Workaholism				
Total Scale	2.58	0.60	0.08	-0.20
Working Excessively	2.46	0.65	0.18	-0.33
Working Compulsively	2.69	0.74	0.14	-0.76
Job Satisfaction				
Total Scale	3.86	0.71	-0.60	0.58
Job Demands-Resources				
Total Scale	2.85	0.29	0.15	0.58
Task Overload	3.14	0.60	-0.51	0.66
Social Support	3.49	0.44	-0.78	0.27
Insecurity	2.76	0.85	-0.30	-0.79
Compensation	1.84	0.71	0.60	-0.34
Job Demands	2.95	0.50	-0.80	-0.21
Job Resources	2.95	0.38	-0.01	0.34

Work-Sense of Coherence				
Total Scale	5.44	0.98	-0.55	0.27
Organisational Commitment				
Total Scale	4.36	0.84	-0.14	0.21
Affective Commitment	4.44	1.41	-0.24	-0.45
Continuance Commitment	4.09	1.24	-0.10	-0.63
Normative Commitment	3.86	0.55	-0.29	0.24
Turnover Intention				
Total Scale	2.55	0.66	0.60	0.56

Table 8.21 shows that the mean score for the total UWES was 4.71, 3.86 for the total JSS, 5.44 for the total Work-SoC scale, and 2.55 for the total TIS-6. With regard to the mean scores for the rest of the scales, they ranged from 0.66 to 0.99 for the Burnout scale, 2.46 to 2.69 for the DUWAS, 1.88 to 3.49 for the JDRS and finally 3.86 to 4.44 for the OCS.

The skewness values for all scales and subscales except UWES (-1.32), emotional exhaustion (1.92) fell within the -1 and +1 range, illustrating a normal distribution, recommended for these coefficients (Gravetter & Wallanu, 2011) (Burnout scale between 0.78 and 0.96, DUWAS between 0.8 and 0.18, JSS = -0.60, JDRS between -0.80 and 0.15, Work-SoC = -0.55, OCS between -0.29 and -0.10 and lastly, TIS-6 = 0.60).

Similarly, the kurtosis values for all scales except the UWES (3.71), total burnout scale (2.04), subscale of burnout; emotional exhaustion (7.31) and subscale of burnout; fatigue (2.04) fell within the -1 and +1 normality range recommended for these coefficients (Tredoux et al., 2013) (subscale of burnout; cognitive weariness = -0.34, DUWAS between -0.20 and -0.76, JSS = 0.58, JDRS between -0.79 and 0.66, Work-SoC = 0.27, Work-SoC between -0.63 and 0.24, OCS between -0.63 and 0.24 and finally 0.56 for the TIS-6).

8.2.1 Integration and Discussion: Descriptive Statistics

The following section provides an interpretation and discussion of the mean scores of the eight measuring instruments, the Burnout scale, UWES, DUWAS, JSS, JDRS, Work-SoC Scale, OCS and TIS-6 for the South African healthcare working population. The results reported in Table 8.21 is relevant to this section.

Firstly, regarding the Burnout scale, the mean scores in this study, for both the subscales and total scale are slightly lower than those reported by Asiwe et al. (2014). The lower mean scores on the cognitive component of the scale, cognitive weariness, suggests that participants' may not be feeling cognitively

overwhelmed to a high degree (Asiwe et al., 2014), in addition to this the lower mean scores obtained on the subscale of emotional exhaustion, the emotional component of the scale, suggests that participants are experiencing low emotional depletion or loss of energy (Maslach, 1998). The lower fatigue scores, indicating the physical component of the scale, indicates that participants could be experiencing low levels of fatigue. In terms of the lower scores on the total burnout scale suggest that participants' may be experiencing low levels of overall burnout.

Overall, the results of the total Burnout scale and its respective subscales suggest that participants may be able to cope well with the current cognitive, emotional and physical demands presented to them in their roles within the healthcare industry, which is leading to them experiencing relatively low levels of Burnout.

Next, regarding the mean scores for the UWES, this study reported high mean scores. These high mean scores correlate with that of Schaufeli et al. (2006) and Carmona-Halty (2019) who suggest that participants are engaged in their roles at the healthcare industry (Schaufeli & Bakker, 2003).

Regarding the mean scores for the DUWAS, the mean scores on the subscales of working excessively and working compulsively, in this research, correlate with the findings of Del Libano (2014). Similarly, the mean scores for the total DUWAS correlates with what was found by Schaufeli and Taris (2004).

The mean scores on the working excessively subscale, the behavioural component on the scale, suggests that participants may be moderately inclined to excessively take on many work-related tasks which requires an excessive amount of time (Rantanen et al., 2014). The mean scores on the working compulsively subscale, the cognitive dimension of the scale suggests that participants may be experiencing moderate levels of an internal obsession and obligation to work (Rantanen et al., 2014). Castillio and Gomez (2012) similarly reported moderate mean scores for the subscales of working excessively and working compulsively. In terms of the total workaholism scale, this study reports moderate levels, indicating that participants may currently be taking on time-demanding, work-related tasks and may be feeling obligated to do so to some extent.

In terms of the JSS, mean score on the total scale for job satisfaction correlates with the findings of Sibamba (2017). The high job satisfaction score indicates that participants feel satisfied and enjoy the work that they are carrying out in the healthcare industry.

With reference to job demands and job resources, mean scores on the subscales of the JDRS ranged between low to high in this study. In terms of the mean score on the subconstruct of insecurity, this study reported lower a mean score in comparison to those reported by Strydom (2005) and Rothmann et al. (2006). The moderate score on insecurity implies that participants could be experiencing a sizeable amount of insecurity in their current job roles and levels and also with regard to their future work roles (Rothmann et al., 2006). The high score on social support suggests that participants are experiencing positive relationships with their colleagues (Jackson & Rothmann, 2005).

This study further found high scores on task overload, suggesting that participants perceive their physical load could be excessive, and could stem from time pressures, having to be attentive to many things at once, having too much work to do and dealing with power struggles (Rothmann & Joubert, 2007). With regard to the final subconstruct, compensation, the study reported low mean scores, suggesting that participants did not feel that they were being compensated sufficiently.

The high scores on the subscales of job demands and job resources and the total scale suggests that whilst participants were of the opinion that the demands posed to them in their jobs were high, they also had the resources available to aid them in mitigating those demands (Rothmann & Joubert, 2007).

In terms of Work-SoC, the mean score for the total Work-SoC scale was in line with what was found by van der Westhuizen (2018) as well as Grødal (2019). The high mean score suggests that participants perceive their work environments to be comprehensible, manageable and that they find meaning in their work roles (Vogt et al., 2013).

Focusing on the organisational commitment scale, the results revealed that the mean scores for the subscales of affective commitment, continuance commitment and normative commitment, as well as the total scale of organisational commitment is in line with results reported by Mitonga-Monga, Flotman, and Cilliers (2019). The mean score for the total OC scale was higher than that reported by Noordn (2010). The high scores on affective commitment suggests that participants feel a strong emotional attachment

to, identification with and involvement with the healthcare industry (Meyer & Allen, 1997). The high continuance commitment score suggests that the participants are committed to their roles in the healthcare industry and the high normative commitment score suggest that this may be due to feeling a sense of obligation (Meyer & Allen, 1997). Overall, the high score on the total work engagement scale suggests that the participants are committed to the healthcare industry (Meyer & Allen, 1997).

Lastly, in terms of the mean scores for the turnover intention scale, the mean scale for the TIS-6 was lower than that reported by Bothma and Roodt (2013) but correlated with results found by Munro (2015). The high mean scores on the scale suggests that participants may be experiencing a strong intention to leave the healthcare industry (Bothma & Roodt, 2013), which could be attributed to their reported moderate levels of workaholism, and high job demands experienced.

8.3 Correlation Analysis

This section reports on the correlational analysis and specifically, the Pearson product-moment correlation coefficients. Pearson product-moment correlations were calculated to establish the relationship between the respective research variables. The Pearson product moment correlation correlations on the scales and the respective subscales Burnout Scale, Work Engagement Scale, Workaholism Scale, Job Satisfaction Scale, Job Demands-Resources Scale, Work-SoC Scale, Organisational Commitment Scale and Turnover Intention Scale are reported in Table 8.22 below.

Table 8.22

Pearson Product Moment Correlation Coefficients on the Scales (n = 461)

		Burnout	JSS	DUWAS	Work-SoC	Job Demands	Job Resources	TIS-6	UWES	OCS
Burnout	Pearson Correlation	1								
	Sig. (2-tailed)									
	N	461								
JSS	Pearson Correlation	-0.27***	1							
	Sig. (2-tailed)	0.00								
	N	461	461							
DUWAS	Pearson Correlation	0.07	0.16***	1						
	Sig. (2-tailed)	0.11	0.00							
	N	461	461	461						
Work-SoC	Pearson Correlation	-0.47***	0.37***	0.02	1					
	Sig. (2-tailed)	0.00	0.00	0.70						
	N	461	461	461	461					
Job Demands	Pearson Correlation	0.11*	-0.05*	0.35***	0.01**	1				
	Sig. (2-tailed)	0.02	0.25	0.00	0.00					
	N	461	461	461	461	461				
Job Resources	Pearson Correlation	-0.30***	0.30***	0.17***	0.35***	0.07***	1			
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.17				
	N	461	461	461	461	461	461			
TIS-6	Pearson Correlation	0.19***	-0.62***	0.08	-0.31***	0.13***	-0.21***	1		
	Sig. (2-tailed)	0.00	0.00	0.08	0.00	0.00	0.00			
	N	461	461	461	461	461	461	461		
UWES	Pearson Correlation	-0.04***	0.49***	0.30***	0.44***	0.14***	0.44***	-0.33***	1	
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	N	461	461	461	461	461	461	461	461	
OCS	Pearson Correlation	-0.22***	0.31***	0.21**	0.41***	0.34***	0.39***	-0.50***	0.38***	1
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	N	461	461	461	461	461	461	461	461	461

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05

In terms of practically significant positive relationships, the following was concluded:

Practical significant positive relationships were found between; Work-SoC scale (r = 0.37) medium effect; $p \leq 0.05$) and the JSS; the job resources scale (r = 0.30; medium effect; $p \leq 0.05$) and the JSS; the UWES (r = 0.49; medium effect; $p \leq 0.05$) and the JSS; the OCS (r = 0.31; medium effect; $p \leq 0.05$) and the JSS; the job demands scale (r = 0.35; medium effect; $p \leq 0.05$) and the DUWAS; the job resources scale (r = 0.35; medium effect; $p \leq 0.05$) and the Work-SoC scale; the UWES (r = 0.44; medium effect; $p \leq 0.05$) and the Work-SoC scale; the OCS (r = 0.41; medium effect; $p \leq 0.05$) and the Work-SoC scale; the UWES (r =

0.44; medium effect; $p \leq 0.05$) and job resources; the OCS ($r = 0.39$; medium effect; $p \leq 0.05$) and the job resources scale and lastly, the OCS and ($r = 0.38$; medium effect; $p \leq 0.05$) the UWES.

Practical significant positive relationships were also found between; job demands ($r = 0.11$; small effect; $p \leq 0.05$) and the burnout scale; the TIS-6 ($r = 0.19$; small effect; $p \leq 0.05$); and the burnout scale; the DUWAS ($r = 0.16$; small effect; $p \leq 0.05$) and the JSS; the job resources scale ($r = 0.17$; small effect; $p \leq 0.05$) and the DUWAS; the UWES ($r = 0.30$; small effect; $p \leq 0.05$); and the DUWAS; the OCS ($r = 0.21$; small effect; $p \leq 0.05$) and the DUWAS; the TIS-6 ($r = 0.13$; small effect; $p \leq 0.05$) and job demands and lastly, between the UWES ($r = 0.14$; small effect; $p \leq 0.05$) and job demands.

In terms of practically significant negative relationships, the following was concluded. A practical significant negative relationship was found between the TIS-6 ($r = -0.62$; large effect; $p \leq 0.05$) and the JSS; between Work-SoC ($r = -0.47$; medium effect; $p \leq 0.05$) and the burnout scale; the job resources scale ($r = -0.30$; medium effect; $p \leq 0.05$) and the burnout scale; the UWES ($r = -0.44$; medium effect; $p \leq 0.05$) and the burnout scale; the TIS-6 ($r = -0.31$; medium effect; $p \leq 0.05$) and the Work-SoC scale; the UWES ($r = -0.33$; medium effect; $p \leq 0.05$) and the TIS-6; and lastly, the OCS ($r = -0.50$; medium effect; $p \leq 0.05$) and the TIS-6. Practical significant negative relationships were also found between; the JSS ($r = -0.27$; small effect; $p \leq 0.05$) and the burnout scale; the OCS ($r = -0.22$; small effect; $p \leq 0.05$) and the burnout scale; and lastly, the TIS-6 ($r = -0.21$; small effect; $p \leq 0.05$) and the job resources scale.

8.3.1 Integration and Discussion: Correlation Analysis – Pearson Product Moment Correlation

Firstly, a positive relationship was found between work engagement and job satisfaction, between work engagement and workaholism, and between work engagement and work-sense of coherence. These results suggest that participants that were high on engagement, tend to spend a lot of their time working, may display workaholic tendencies, but they are also satisfied in their jobs, possibly enjoy these working conditions and are able to cope with it. This was confirmed by Schaufelli et al. (2002), stated that engaged employees showed positive emotions such as joy and enthusiasm (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002) and by Spence and Robbins (1992) who stated that workaholism comprises of three properties; work involvement, a feeling of being compelled to work, as well as work enjoyment. In addition, a positive relationship was found between the work engagement and job demands and job resources. This could mean that mean that when participants experience their job demands and job resources to this extent, they could potentially feel engaged. Schaufeli and Bakker (2004) confirmed job

resources are the most important predictors of work engagement, as work engagement is positively associated with job resources (job characteristics that deal with demands, which help in achieving goals, or foster employee development).

The results further revealed a positive relationship between organisational commitment and job satisfaction; organisational commitment and work-related sense of coherence; organisational commitment and job resources and lastly between organisational commitment and work engagement. These results suggest that satisfied employees view and experience their work environments positively, they are engaged in their jobs and are likely to be committed to their organisations. Mueller et al. (2013) confirmed that employees that are both satisfied in their job roles and are committed to the organisation, bond with the organisation and this will result in greater cooperation at work and a reduced likelihood of leaving the organisation. Furthermore, because the job resources available to the participants, are allowing them to cope with the job demands experienced, they are likely to be committed to their organisations. Bakker (2010) found that job resources positively predicted organisational commitment.

A positive relationship was found between Work-SoC and job satisfaction. Antonovsky (1987) stated that a person with a strong SOC is more likely to define stimuli as non-stressful and he or she will adapt automatically to the demands that they are faced with. Strümpfer and De Bruin (2009) confirmed this relationship and stated that the SOC exhibited by employees was strongly, and positively related to job satisfaction. Further positive relationships were found between job resources and job satisfaction, and between job resources and Work-SoC. This further suggests that the job resources available to the participants, are allowing them to cope with the job demands, which is resulting in them being satisfied and leading them to perceive they have a positive work environment and work life.

Positive relationships were further noted between job demands and workaholism, and between workaholism and burnout. This could mean that in their work environments, those participants that displayed high levels of workaholism, are possibly doing so due to the excessive demands that they are facing, which is likely to be the root cause of their burnout levels. If one were to view workaholism from the standpoint of the amount of time spent working, then this correlates with Demerouti and Bakker (2011) who stated that employees need to invest significantly greater amounts of time to complete jobs with high job demands. From the opposing standpoint, Hakanen et al. (2012) stated that due to workaholics creating self-imposed demands, these workers tend to make their work environments complicated.

An interesting positive relationship was found between workaholism and job satisfaction. This means that participants that displayed workaholic tendencies also enjoyed their jobs. This could be aligned to the positive view of workaholism, such as that by Moster (1993) who believes that workaholism should be viewed as an approach of attitude towards working, as opposed to the amount of time spent working.

The last positive relationships were found between turnover intention and job demands and turnover intention and burnout. Simply put, this could mean that those participants that are experiencing job demands and burnout in their roles, are at risk of leaving their organisations.

The results next showed a negative significant relationship between work engagement and burnout and turnover intention. Participants who experienced high levels of burnout, were disengaged and wanted to leave their respective organisations. Samad (2006) confirmed that employees who have fulfilled their wellbeing in the workplace are more productive, they contribute to an organisation's goals and their intention to leave the organisation is low. Similarly, a negative relationship was found between turnover intention and work-related sense of coherence, and between turnover intention and job satisfaction, indicating that participants who did not perceive they had a quality work life, want to leave their organisations. The results further suggest that participants who were not satisfied in their jobs experienced burnout and those participants that were high on burnout, were not committed to their organisations. Supporting evidence for this was found by Kalliath et al. (1998) who found that low levels of organisational commitment have been found to influence job burnout in hospital employees. Furthermore, Leiter and Maslach (1998) concluded that burnout and organisational commitment are correlated, and both of them can be affected by the interpersonal environment.

8.4 Inferential Statistics

8.4.1 Research Aim 1

8.4.1.1 Determining Occupational Wellbeing Type Combinations

Cluster analysis was conducted in order to determine which type combinations of occupational wellbeing could be distinguished based on the measurements of work engagement, burnout, workaholism and job satisfaction. This step involved testing research hypothesis H1: It was hypothesized that the following occupational wellbeing types will emerge parallel with the four quadrants of the circumplex model (see the discussion in Chapter three):

- *Engaged*, which is characterized by high levels of work engagement and job satisfaction, and with low levels of burnout and workaholism;
- *Fatigued*, which is characterized by average levels of work engagement and job satisfaction, and with low levels of burnout and workaholism;
- *Bored-Out*, which is characterized by low levels of work engagement and job satisfaction, and with high levels of burnout, and workaholism and lastly;
- *Burned-Out*, which is characterized by low levels of work engagement and job satisfaction, and high levels of burnout and workaholism

K-means cluster analysis was carried out to validate the four occupational wellbeing types. The results revealed that the four-cluster model failed to converge. See Tables 8.23 illustrating the iteration history and 8.24 illustrating the number of cases in each cluster below.

Table 8.23
Iteration History – Change in Cluster Centres

Iteration	1	2	3	4
1	1.54	1.83	1.84	1.38
2	0.06	0.16	0.33	0.46
3	0.04	0.03	0.16	0.00
4	0.01	0.00	0.05	0.00
5	0.05	0.01	0.20	0.26
6	0.02	0.00	0.07	0.00
7	0.02	0.00	0.06	0.00
8	0.02	0.00	0.06	0.00
9	0.02	0.00	0.05	0.00
10	0.04	0.00	0.10	0.00

Table 8.23 above illustrates that iterations stopped due to the fact that the maximum number of iterations were performed. Iterations, in this instance, had failed to converge. The maximum absolute co-ordinate change for any center is 0.70, and the current iteration is 10. The minimum distance between initial center is 3.91.

Table 8.24

Number of cases in each cluster

Cluster	1	251
	2	92
	3	111
	4	7
Valid		461
Missing		0.00

Based on the results, as shown above, a two-cluster solution was performed, and iteration was achieved.

These results are displayed in Tables 8.25 below.

Table 8.25

Iteration History – Change in Cluster Center

Iteration	1	2
1	2.91	1.72
2	0.57	0.14
3	0.35	0.16
4	0.16	0.07
5	0.06	0.03
6	0.02	0.01
7	0.00	0.00

Table 8.25 shows that convergence was achieved due to no or a small change in cluster center. The maximum absolute coordinate change for any center is 0.000. The current iteration is 7 and the minimum distance between initial center is 6.776.

However, results of the One-Way Analysis of Variance (ANOVA) procedure, as shown in Table 8.26 below, revealed that there was no statistically significant difference between the clusters for the workaholism scores (p-value = 0.64).

Table 8.26

ANOVA Results for Two-Cluster Model

	Cluster		Error		F	Sig.
	Mean Square	Df	Mean Square	df		
Burnout	109.47	1	0.35	459	317.09	0.00
Work Engagement	180.48	1	0.41	459	437.87	0.00
Job Satisfaction	91.34	1	0.31	459	292.42	0.00
Workaholism	0.08	1	0.36	459	0.21	0.64

Owing to the statistically insignificant workaholism scores, it was decided to carry out a three-cluster model analysis. Table 8.27 shows that convergence was achieved, and Table 8.28 shows the number of cases in each cluster. Table 8.29 below further illustrates that the scores were statistically significantly different ($p < 0.001$) for all variables (burnout, work engagement, workaholism and job satisfaction) between the clusters, confirming that a three-cluster model was suitable for the purposes of this study.

Table 8.27

Iteration History – Changes in Clusters

Iteration	1	2	3
1	3.41	3.12	2.93
2	0.25	0.31	0.45
3	0.11	0.13	0.16
4	0.05	0.04	0.04
5	0.04	0.03	0.04
6	0.02	0.02	0.05
7	0.01	0.01	0.03
8	0.00	0.00	0.00

Table 8.27 above illustrates that convergence was achieved due to no or a small change in cluster center. The maximum absolute coordinate change for any center is 0.00. The current iteration is 8 and the maximum distance between initial center is 5.57.

Table 8.28

Number of cases in each cluster

	1	141
	2	237
Cluster	3	83
Valid		461
Missing		0.00

As shown in Table 8.28 above, there were 141 cases for cluster 1, 237 cases for cluster 2 and 83 cases for cluster 3.

Table 8.29
ANOVA Results for the Three-Cluster Model

	Cluster		Error		F	Sig.
	Mean Square	Df	Mean Square	Df		
Work Engagement	73.70	2	0.26	458	280.07	0.00
Burnout	115.82	2	0.30	458	384.35	0.00
Workaholism	6.72	2	0.34	458	20.04	0.00
Job Satisfaction	45.55	2	0.31	458	145.26	0.00

*** $p < 0.001$

Table 8.29 above shows the results of the differences in ANOVAs in investigating whether differences exist between the variables (burnout, work engagement, workaholism and job satisfaction) regarding each of the clusters. As can be seen from Table 8.29, the three occupational wellbeing type clusters are characterized by scores that deviate moderately to strongly ($p < 0.001$) from the respective means, indicating that ANOVA results are significant for all the variables.

Table 8.30 below shows the descriptive statistics of the employee wellbeing attributes across the three clusters.

Table 8.30
Comparison of the employee wellbeing attributes across the three clusters

Employee wellbeing attributes	Cluster 1		Cluster 2		Cluster 3		η^2
	Exhausted (n=141)		Engaged (n=237)		Burned out (83)		
	M	SD	M	SD	M	SD	
Work Engagement	4.63	0.48	5.42	0.42	3.52	0.88	0.63
Burnout	1.60	0.62	0.45	0.37	1.54	0.64	0.55
Workaholism	3.93	0.52	4.14	0.59	2.93	0.52	0.08
Job Satisfaction	2.72	0.57	2.61	0.56	2.23	0.64	0.39

$\eta^2 = \text{eta}$, *** $p < 0.001$

Table 8.30 illustrates that Cluster 1 showed high burnout scores, lower scores for work engagement, and average scores for workaholism and job satisfaction, the decision was therefore made to name this cluster Exhausted. Cluster 2 showed higher scores for work engagement, slightly higher than average scores for job satisfaction and workaholism, and low scores for burnout and was therefore named Engaged. And

finally, Cluster 3 showed high scores of burnout, low levels of work engagement, workaholism and job satisfaction, and was therefore named Burned-Out.

The eta-squared (η^2) values shown in Table 8.30 above, indicate that 63% of the variance between the clusters may be explained by work engagement, 55% by burnout, 0.8% by workaholism and 39% by job satisfaction. One can therefore deduce that workaholism did not contribute to a great extent to each of the clusters. This may be attributed to the validity and reliability results reported in Section 8.1 which revealed that both the reliability and validity for the DUWAS did not work out as expected in this study.

The three-cluster model is illustrated in Figure 8.1 below and highlights the standardized scores for each of the employee wellbeing attributes for the identified occupational wellbeing clusters.

As stated above, the clusters confirmed the following occupational wellbeing types; “Exhausted”, labelled as Type 1 “Engaged”, labelled as Type 2 and “Burned-Out”, labelled as Type 3.

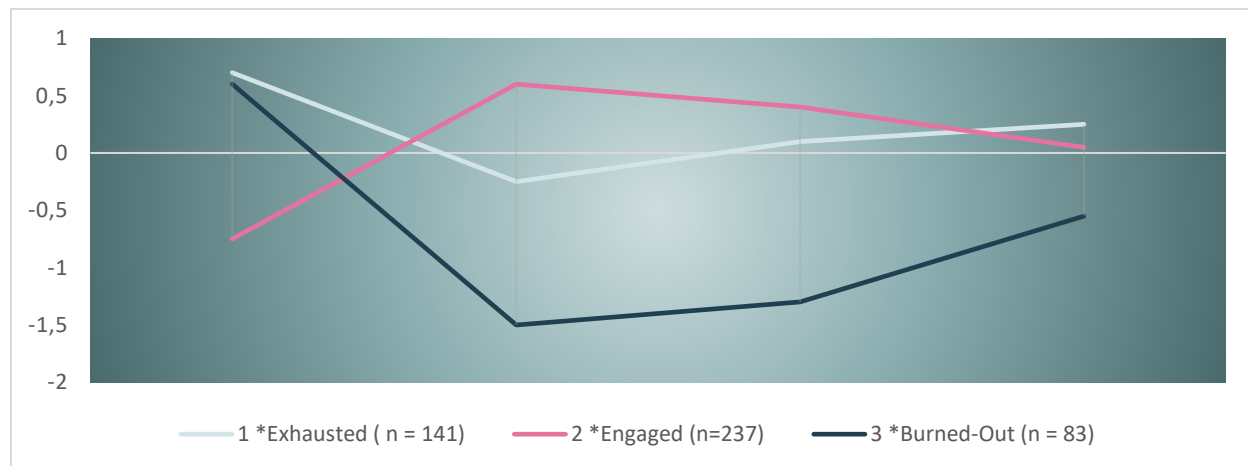


Figure 8.1. The three occupational wellbeing types (n=461)

In summary, occupational wellbeing Type 1, “exhausted” includes 141 employees who scored high on burnout, moderate on workaholism and job satisfaction, and lower on work engagement. Occupational wellbeing Type 2 “Engaged” includes 237 employee who scored high on work engagement, moderate on job satisfaction and workaholism, and low on burnout. Occupational wellbeing Type 3, “Burned-Out” includes 83 employees who scored high on burnout and low on work engagement, job satisfaction and workaholism.

8.4.1.2 Integration and Discussion of the Cluster Analysis

Research aim 1, Tables 8.23 to 8.30 and Figure 8.1 are of relevance to this section.

Research aim 1: To conduct an empirical investigation that explores the direction and magnitude of the statistical inter-correlations between the employee wellbeing attributes (burnout, work engagement, workaholism, job satisfaction), and determine which type combinations of occupational wellbeing can be distinguished based on the measurements of burnout, work engagement, workaholism and job satisfaction. This aim relates to H1.

The results provided little supportive evidence for research hypothesis 1.

The results revealed that the four occupational types, in line with the circumplex model of occupational wellbeing did not emerge, as there were no statistically significant differences between the types for the workaholism scores. In the study by Mäkikangas et al. (2015), the authors similarly concluded that the scores of workaholism did not differ between the occupational wellbeing types, and as a result, the expected workaholic type did not emerge in their study either. However, it should be noted that studies by both Van Beek et al. (2011) and Salanova et al. (2014) found support for the workaholic type.

This study instead found statistically significant support for three occupational wellbeing types, namely, Exhausted, Engaged and Burned-Out. Whilst this study only found support for three occupational wellbeing types, these types support the assumptions of the circumplex model, which postulates that four different states of occupational wellbeing, i.e. burnout, work engagement, workaholism and job satisfaction may be used to describe the nature of employee wellbeing (Warr, 1990). The results of this study are further correlated to the circumplex model, in terms of the enthusiasm-depression axis, as reported by Warr (1994), with the energy dimension being linked to work engagement and the depression dimension linked to exhaustion and burnout (Mäkikangas et al., 2014). The largest type group was the engaged type, as it comprised of the greatest number of participants, followed by the exhausted type, and lastly, the smallest type group was the burned-out type as it comprised of the least number of participants. Furthermore, the results suggested that the variance of the occupational wellbeing types was foremost contributed to by work engagement, followed by burnout, job satisfaction and lastly, workaholism.

The first type found in this study, namely the Exhausted type, showed that participants belonging to this group experienced higher levels of burnout, moderate levels of workaholism and job satisfaction, and lower levels of work engagement. Interestingly, this means that whilst these healthcare workers experience some levels of burnout, they are to a certain extent, “addicted to their work” (Oates, 1971, p. 11), and enjoy their jobs. In terms of understanding what healthcare workers belonging to this type are experiencing, it appears that these workers are experiencing burnout to a certain extent, however, they also appear to still be coping with and enjoying their jobs to a certain extent. It is important to note that these workers should be considered a high-risk group; that is a group that is at risk of becoming completely burned-out. The results therefore suggest that these workers are therefore likely to require an intervention that will prevent them from becoming burned-out. In terms of such an intervention, those interventions that focus on increased work engagement and job satisfaction may assist in buffering the effects of burnout to prevent these workers from becoming totally burned-out and possibly disengaged. The exhausted type was not one of the types that emerged as per the original circumplex model of occupational wellbeing, however, it resembles the burnout dimension in the circumplex model which is positioned in the unpleasant affective state of low activation (Warr, 1994) (bottom left quadrant), in terms of being high on the level of burnout experienced. Where it differs is the impact of the moderate levels of job satisfaction that these workers appear to be experiencing. The implication of the average job satisfaction levels implies that whilst these workers may be at risk of disengagement, they enjoy the work that they do, and will, as a result, continue investing time into performing work (confirmed by the moderate levels of workaholism experienced). The exhausted-type further resembles the bored-out type found by Mäkikangas et al. (2015), with burnout levels being very high and work engagement levels being lower. Previous studies have not found a type that has mirrored the exhausted type exactly as it has emerged in this study.

The second type, the Engaged type, showed that participants belonging to this group show high levels of work engagement, moderate levels of job satisfaction and workaholism and low levels of burnout. Like the results found by Salanova et al. (2014) and Mäkikangas et al. (2015) the engaged type reported the highest levels of pleasure, as shown by their high levels of work engagement and relatively high levels of job satisfaction (Mäkikangas et al., 2015). Healthcare workers belonging to this occupational wellbeing type are likely to be experiencing their jobs as enjoyable and satisfying, and will work relatively hard, as they enjoy their work. In addition, these workers will tend to display high levels of energy and are willing to invest time in their work. Furthermore, they are not at risk of burnout as they experience very low

levels of burnout. It will however still be interesting to note and determine what could be done to increase these workers satisfaction levels. In line with Sonnentag (2003) it is expected that these workers will tend to recover effectively from challenges experienced at work, as they view their work environments in a positive way. The engaged type relates to the work engagement dimension as per the circumplex model of occupational wellbeing, which is positioned in the pleasant affective state of high activation (Warr, 1994) (top right quadrant). Those belonging to this quadrant, are typically excited, enthusiastic, energised, happy and pleased in terms of their work attitudes (Bakker & Oerlemans, 2011). They are further likely to display high commitment levels towards the organisation and report good health.

The last type, the burned-out type showed that workers from this group scored high on burnout, and low on work engagement, job satisfaction and workaholism. These results emulate that of Mäkikangas et al. (2015) who found that burned-out type was the reverse of the engaged type, by being high on burnout, and low on work engagement. This type also strongly correlates with the findings of Salanova et al. (2014) who found that burned-out employees were low on energy, pleasure, challenge, as well as on skills and identification in their job roles. In the context of this study, those belonging to this occupational wellbeing type are likely to be experiencing very low energy levels, are disengaged and are unlikely to be enjoying their work or investing their time in it. Furthermore, the burned-out type is likely to adopt a negative attitude towards their work. This group should be considered a high-risk group, with workers whose occupational wellbeing is comprised. The danger lies not only with the ill health of these employees, but also with the organisation losing these workers due to low commitment levels. This type further relates to the burnout dimension as per the circumplex model of occupational wellbeing, which is positioned in the unpleasant affective state of low activation (Warr, 1994) (bottom left quadrant), in terms of being high on the level of burnout experienced and low on the other dimensions. The difference between this type and the exhausted type found in this study is that unlike the exhausted type, these employees do not seem to be coping well, neither are they enjoying their jobs (i.e. they are experiencing lower levels of work engagement, job satisfaction and workaholism). The results suggest that they are therefore in need of a fast acting and serious intervention that will assist them in buffering against the high levels of burnout experienced.

Evidence for the four-type structure of occupational wellbeing, as per the circumplex model of occupational wellbeing was found in studies by Van Beek et al. (2011), who confirmed the types of workaholics, engaged workers, engaged workaholics and non-workaholic/non-engaged workers;

Salanova et al. (2014), who found the types of relaxed, work engaged or enthusiastic, workaholic or tense and burned-out or fatigued; Mäkikangas et al. (2015) who confirmed the types of engaged, burned-out, ordinary and bored-out, and finally Dijkhuizen et al. (2016) who found support for all four types in line with the circumplex model. This study is similar to that of Mäkikangas et al. (2014) who only found support for three occupational wellbeing types. The three types identified by the authors among a sample of Finnish social and healthcare and service sector workers include, constantly vigorous, concurrently vigorous and exhausted, and constantly exhausted. This study therefore only partially found support for the circumplex model of occupational wellbeing, as only three-occupational wellbeing types emerged, and of the three types, only two types reflected strong similarities with the original model (i.e. the engaged and burned-out types).

It is important to note that whilst the construct of workaholism did not contribute to a large extent to the occupational wellbeing types and the results of this study, it was retained for further analysis as it formed part of the circumplex model of occupational wellbeing.

Summed up, this study found that, firstly, compared with the other types, the engaged type showed the highest level of engagement in their jobs, compared to the exhausted and burned-out types. Secondly, the engaged and exhausted types spend more time working compared to the burned-out types and experience higher levels of job satisfaction as compared to the burned-out type. Lastly, regarding burnout, the exhausted and burned-out types showed high levels of burnout, whilst the engaged type experienced the lowest levels of burnout.

8.4.2 Research Aim 2

8.4.2.1 Differences Between the Occupational Wellbeing Types and the Psychosocial Antecedent Variables

In order to determine if differences exist between the identified occupational wellbeing types (i.e. exhausted, engaged and burned-out), and the psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), multivariate tests (MANOVA) was carried out. This involved testing research hypothesis 2a.

Table 8.31 below illustrates that the multivariate test is statistically significant as Pillai's Trace is significant $F = 18.329$; p value < 0.05 .

Table 8.31

Significance of the multivariate test

Effect		Value	F	Hypothesis df	Error df	Sig.	η^2
Intercept	Pillai's Trace	0.99	13687.97 ^{b*}	4.00	455.00	0.00	0.99
	Wilks' Lambda	0.01	13687.97 ^{b*}	4.00	455.00	0.00	0.99
	Hotelling's Trace	120.33	13687.97 ^{b*}	4.00	455.00	0.00	0.99
	Roy's Largest Root	120.33	13687.97 ^{b*}	4.00	455.00	0.00	0.99
QCL_1	Pillai's Trace	0.28	18.33	8.00	912.00	0.00	0.14
	Wilks' Lambda	0.73	19.35 ^{b*}	8.00	910.00	0.00	0.15
	Hotelling's Trace	0.36	20.38 [*]	8.00	908.00	0.00	0.15
	Roy's Largest Root	0.33	37.44 ^{c*}	4.00	456.00	0.00	0.25

Next, MANOVA was carried out with the occupational wellbeing types as independent variables and the psychosocial antecedent variables as the dependent variables. The results are displayed in Table 8.32 below.

Table 8.32

MANOVA with occupational wellbeing types as independent variables (n=461)

	Fatigue		Engaged		Burned-Out		df	F	p
	M	SE	M	SE	M	SE			
Age	37.27	0.68	35.63	0.52	36.93	0.88	2	2.10	0.12
Job Demands	3.02	0.04	2.97	0.32	2.79	0.55	2	5.71	0.000
Job Resources	2.95	0.03	3.12	0.02	2.72	0.04	2	40.47	0.000
Work-SoC	5.16	0.08	5.83	0.06	4.83	0.1	2	48.26	0.000

Table 8.32 shows that the occupational wellbeing types differed significantly on the scores for Job Demands ($F(2) = 5.71$, $p < 0.05$), Job Resources, $F(2) = 40.47$, $p < 0.05$ and Work-SoC, $F(2) = 48.26$, $p < 0.05$. Age, however, did not differ significantly between the three clusters as $p > 0.05$ ($p = 0.12$).

The results of the specific differences between the occupational wellbeing types and the psychosocial antecedent variables are shown in Table 8.33.

In terms of how each of the occupational wellbeing types differ with regard to the psychosocial antecedent variables, the following was found:

- There is statistically no significant difference between the three occupational wellbeing types based on the age of the participants
- There is a significant difference between the exhausted type and burned-out type with regard to job demands. The exhausted type experienced statistically significantly higher job demands than the burned-out type.
- There is a significant difference between the engaged type and burned-out type with regard to job demands. The engaged type experienced statistically significantly higher job demands than the burned-out type
- There is a statistically significant difference between all three types and the degree of job resources experienced. The engaged type experienced the highest degree of job resources, then the exhausted type and lastly, the burned-out type who experienced the lowest degree of job resources.
- All three types differed statistically significantly with regards to Work-SoC with the engaged type having the highest Work-SoC, then the exhausted type and lastly, the burned-out type with the lowest level of work-soc.

Table 8.33 below presents the pairwise comparisons between occupational wellbeing types and psychosocial antecedent variables

Table 8.33

Pairwise comparisons between occupational wellbeing types and psychosocial antecedent variables

	(I)Cluster no. of case	(J)Cluster no. of case	Mean difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b LowerBound	95% Confidence Interval for Difference Upper Bound
Age	Exhausted	Engaged	1.64	0.85	0.16	-0.41	3.69
		Burned-Out	0.34	1.11	1.00	-2.32	3.01
	Engaged	Exhausted	-1.64	0.85	0.16	-3.69	0.41
		Burned-Out	-1.30	1.02	0.61	-3.76	1.16
Job Demands	Burned-Out	Exhausted	-0.34	1.11	1.00	-3.01	2.32
		Engaged	1.30	1.02	0.61	-1.16	3.76
	Exhausted	Engaged	0.05	0.05	1.00	0.08	0.18
		Burned-Out	0.28*	0.07	0.00	0.06	0.39
Engaged	Exhausted	-0.05	0.05	1.00	-0.18	0.08	
	Burned-Out	0.18*	0.06	0.02	0.02	0.33	
Burned-Out	Exhausted	-0.23*	0.07	0.00	-0.39	-0.06	
	Engaged	-0.18*	0.06	0.02	-0.32	-0.02	

Job Resources	Exhausted	Engaged	-0.16*	0.04	0.00	-0.25	-0.07
		Burned-Out	0.23*	0.05	0.00	0.18	0.35
	Engaged	Exhausted	0.16*	0.04	0.00	0.74	0.25
		Burned-Out	0.40*	0.05	0.00	0.29	0.51
Work-SoC	Burned-Out	Exhausted	-0.23*	0.05	0.00	-0.35	-0.12
		Engaged	-0.40*	0.05	0.00	-0.51	-0.29
	Exhausted	Engaged	-0.67*	0.10	0.00	-0.89	-0.44
		Burned-Out	0.33*	0.12	0.03	0.03	0.62
Work-SoC	Engaged	Exhausted	0.67*	0.10	0.00	0.44	0.89
		Burned-Out	0.99*	0.11	0.00	0.72	1.27
	Burned-Out	Exhausted	-0.33*	0.12	0.03	-0.62	-0.03
		Engaged	0.99*	0.11	0.00	-1.27	-0.72

Based on the above discussion of results, it may be concluded that there is a difference between all three clusters with regards to their experience of job demands, job resources and Work-SoC, but no difference between the three clusters based on the age of the participants.

8.4.2.2 Predicting the Occupational Wellbeing Types by Means of the Psychosocial Antecedent Variables

Multinomial logistic regression analysis was conducted to determine if the psychological antecedent variables (age, job demands, job resources and work-related sense of coherence) are able to predict the occupational wellbeing types. This involved testing research hypothesis 2b.

The results of the multinomial logistic regression are displayed in Table 8.34 and Table 8.35 below, where the Burned-Out type was used as the reference category. This analysis was carried out to understand if the psychological antecedent variables (age, job demands, job resources and work-related sense of coherence) are able to predict the Exhausted and Engaged occupational wellbeing types in comparison to the Burned-Out type.

Table 8.34
Results of multinomial logistic regression with Burned-Out type as reference category

Model	Model Fitting Criteria		Likelihood Ratio Tests			Pseudo R-Square	
	-2 Log Likelihood	Chi-Square	Df	Sig.	Cox and Snell	Nagelkerke	
Intercept Only	932.67				0.27	0.32	
Final	785.36	147.31	8	0.00	0.16		

Table 8.34 above shows how well the model fits the data. The -2 Log likelihood (goodness of fit test) value for the intercept only model is 932.67 and that of the final model is 785.36. The chi-square which is the difference between the -2 Log-likelihoods of the intercept and final model are significant at 0.00, indicating that the model is a good fit.

The Pseudo R-Square results of the Cox and Snell, Nagelkerke and McFadden of the model are shown in table 8.15 above. The higher pseudo R-Square that approached to 1 is considered a better fit. In this case, Table 8.15 reported Nagelkerke (0.32) is higher value than Cox and Snell (0.27) and McFadden (0.16). The highest value of Pseudo R-Square that showed by Nagelkerke in Table 8.34 indicates the relationship between the predictor and predicted variables were strong.

Table 8.35 below shows the individual parameter estimates for the Engaged and Exhausted types in comparison to the Burned-Out type.

Table 8.35
Results of the Parameter Estimates with Burned-Out type as reference category

Occupational Wellbeing Type ^a	B	S. E	Wald	Df	Sig.	Exp (B)	95% CI Interval for		
							Exp (B)		
							Lower	Upper	
Engaged	Age	-0.03	0.02	1.64	1	0.20	0.98	0.94	1.014
	Work-SoC	1.13	0.18	39.85	1	0.00	3.08	2.16	4.38
	Job Demands	0.92	0.32	8.38	1	0.04	2.52	1.35	4.70
	Job Resources	2.50	0.46	29.85	1	0.00	12.15	4.96	29.76
Exhausted	Age	0.10	0.02	0.29	1	0.59	1.01	0.97	105
	Work-SoC	0.30	0.16	3.30	1	0.69	1.34	0.98	1.85
	Job Demands	1.15	0.32	12.88	1	0.00	3.15	1.68	5.89
	Job Resources	1.84	0.46	16.40	1	0.00	6.31	2.59	15.39

a. Reference category: Burned-Out type

b. $p < 0.05$

The top half of Table 8.35 shows the effects of the Engaged type in comparison to the Burned-Out type. The interpretation of these effects is discussed individually below:

- Age: The age of participants did not significantly predict if the participants were engaged compared to burned-out $b = -0.03$, Wald $\chi^2(1) = 1.64$ and $p = 0.20$. The odds ratio for age tells us that the change in odds of participants becoming engaged (rather than burned-out) is 0.94. In other words, the age of participants does not significantly determine if a person is engaged, rather than burned-out.

- Work-SoC: Work-SoC significantly predicted if participants were engaged compared to burned-out, $b = 1.13$, Wald $\chi^2(1) = 39.85$ and $p = 0.00$. The odds ratio tells us that as the Work-SoC of participants increases, the change in odds of them becoming engaged (rather than burned-out), is 3.08. Simply stated, as the Work-SoC of participants increases, the more likely they are to become engaged, rather than burned-out.
- Job Demands: Job demands significantly predicted if participants were engaged compared to burned-out, $b = 0.92$, Wald $\chi^2(1) = 8.38$ and $p = 0.04$. The odds ratio for job demands tells us that the change in odds of participants becoming engaged (rather than burned-out) is 2.52. In other words, participants are less likely to become engaged compared to them becoming burned-out, as a result of the demands experienced.
- Job Resources: Job resources significantly predicted if participants were engaged compared to burned-out, $b = 2.50$, Wald $\chi^2(1) = 29.85$ and $p = 0.00$. The odds ratio tells us that as the job resources of participants increases, the change in odds of them becoming engaged (rather than burned-out), is 12.15. Simply stated, as the job resources of participants increases, the more likely they are to become engaged, rather than burned-out.

The bottom half of Table 8.35 shows the effects of the Exhausted type in comparison to the Burned-Out type. The interpretation of these effects is discussed below:

- Age: The age of participants did not significantly predict if participants were exhausted compared to burned-out, $b = 0.10$, Wald $\chi^2(1) = 0.29$ and $p = 0.59$. In short, the age of participants does not significantly determine if a person is exhausted, rather than burned-out.
- Work-SoC: Work-SoC did not significantly predict if participants were exhausted compared to burned-out, $b = 0.30$, Wald $\chi^2(1) = 3.30$ and $p = 0.69$. In other words, Work-SoC does not significantly determine if a person is exhausted, rather than burned-out.
- Job Demands: Job demands significantly predicted if participants were exhausted compared to burned-out, $b = 1.15$, Wald $\chi^2(1) = 12.88$ and $p = 0.00$. The odds ratio for job demands tells us that the change in odds of participants becoming exhausted (rather than burned-out) is 3.15. In other words, participants are less likely to become exhausted compared to them becoming burned-out, due to job demands experienced.
- Job Resources: Job resources significantly predicted if participants were exhausted compared to burned-out, $b = 1.84$, Wald $\chi^2(1) = 16.40$ and $p = 0.00$. The odds ratio tells us that as the job resources of participants increases, the change in odds of them becoming exhausted (rather than burned-out),

is 2.08. Simply stated, as the job resources of participants increases, the more likely they are to become exhausted, rather than burned-out.

Based on the above discussion of results it can be concluded that;

- Age was not a significant predictor of the three occupational wellbeing types
- Work-SoC significantly predicts the engaged type (in comparison to the burned-out type)
- Job Demands significantly predicts the engaged type (in comparison to the burned-out type) and the exhausted type (in comparison to the engaged type)
- Job resources significantly predicts the engaged type (in comparison to the burned-out type), and the exhausted type (in comparison to the burned-out type).

8.4.2.3 Integration and Discussion of the MANOVA and Multinomial Logistic Regression Analysis

Research aim 2 and Tables 8.31 to 8.35 are of relevance to this section.

Research aim 2: To determine if the occupational wellbeing type combinations differ with regard to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence). This relates to H2a and H2b.

The results obtained yielded support for research hypothesis 2a and 2b to some extent.

The discussion will begin by unpacking what the results revealed in terms of how the occupational wellbeing types differed regarding the psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence).

In terms of age, the results revealed that there was no statistically significant difference between the occupational wellbeing types (exhausted, engaged, burned-out), meaning that the different age groups were equally represented in each type. These findings are in contradiction to what has been previously found in research regarding the relationship between age and wellbeing. Previous research has found that older employees may be better equipped to respond to negative events at work (Scheibe & Zancher, 2013), as older age has found to buffer against negative consequences (Hsu, 2019; Mauno, Ruokolainen, & Kinnunen, 2013), and as a result, it can be assumed that the relationship between age and the exhausted and burned-out types would be low. In line with this, studies by Amati et al. (2010), Maier and Bruinstein

(2001) and Weigl et al. (2010) all confirmed that an increase in the level of employee-wellbeing was generally found amongst older employees whilst a decrease in employee wellbeing was noted amongst younger employees. A study by Aras (2006) stated that young people tend to experience more emotional exhaustion in their workplace than others, suggesting that the relationship between the burned-out type and age should have been higher as found in the current study. Johnson et al. (2017) concluded that positive associations with age are shown in constructs such as work engagement. The above discussed relationship with age and the wellbeing is in line with life-course theories, which according to Baltes et al. (1998) states that adaptation and stress management improve with age and therefore contribute to favourable wellbeing development.

A possible explanation for this study finding no differences between age and the occupational wellbeing types could be due to fact that there were only three age groups in this study and as a result, the range of the age groups were large (i.e. 18-30 years, 31-45 years and 46-64 years).

Regarding job demands, a statistically significant difference was found between the exhausted type and burned-out types, and between the engaged and burned-out types. The results revealed that the exhausted and engaged types experienced the higher job demands as compared to the burned-out type, whilst there was no statistically significant difference in job demands experienced between the engaged and exhausted types. The link between job demands and exhaustion was confirmed by the first process of the JD-R model which suggests that job demands deplete employees' physical and psychological resources and may therefore result in a state of exhaustion (Demerouti et al., 2001). This study is therefore partially in line with Adil (2018) who more recently confirmed that job demands are positively associated with burnout. According to Adil (2018), the state of burnout is generally observed due to higher job demands. The exception in the current study is that the exhausted type experienced even higher job demands than the burned-out type.

In terms of job resources, the results revealed a statistically significant difference between all three types and the degree of job resources experienced. It was found that the engaged type experienced the highest degree of job resources, followed by the exhausted type, and the burned-out type experienced the lowest degree of job resources. These findings are confirmed by the theory of the JD-R model (Demerouti et al., 2001) which loosely states that job resources are positively related to engagement.

It is important to note from the above discussion on the results of job demands and job resources, that whilst the exhausted type experienced the highest level of job demands, they experienced higher job resources than the burned-out group and it can thus be concluded that the job resources buffered their health in this regard to some extent. Demerouti et al. (2001) highlighted the importance of job resources by stating that job resources buffer the impact of job demands, and this is consistent with the Demand–Control Model (DCM; Karasek, 1998) and the Effort–Reward Imbalance Model (ERIM; Siegrist, 1996). This study further found that job demands are strongly linked to burnout, whilst job resources were strongly linked to engagement. This is in line with the COBE model, that states that burnout is predicted by job demands, whilst engagement is predicted by the availability of job resources Rothmann and Joubert (2007) as well as Tooren and Jong further confirmed that job demands are likely to have detrimental effects on employee health and wellbeing, whilst job resources are likely to have beneficial effects.

Lastly, in terms of Work-SoC, the results showed that all three types (exhausted, engaged, burned-out) differed statistically significantly with regards to the level of Work-SoC experienced. The engaged type showed the highest level of Work-SoC, followed by the exhausted type and lastly the burned-out type, who showed the lowest levels of Work-SoC. These findings have been confirmed in previous research. Vogt et al. (2013) found that Work-SoC is a strong predictor of work engagement, indicating that employees high on work engagement are likely to experience high levels of Work-SoC.

From the discussion above on how the occupational wellbeing types differed with regard to the psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), it can be concluded that the exhausted type experienced the highest levels of job demands, but also experienced higher levels of job resources and Work-SoC than the burned-out type. The engaged type experienced lower job demands than the exhausted group, but not lower job demands than the burned-out type. The engaged type then experienced the highest level of job resources and Work-SoC compared to all three types.

Next follows a discussion into what the results showed regarding if the psychosocial antecedent variables were able to significantly predict the occupational wellbeing types.

In terms of age, the results revealed that age did not statically significantly predict the exhausted or engaged type in comparison to the burned-out type. This is contradictory to what previous studies have

found. Goštautaitė and Bučiūnienė (2015) concluded that age was positively related to engagement and Åkerstedt, Discacciati, Miley-Åkerstedt, and Westerlund (2018) stated that aging, has a positive affect on fatigue, which is defined similarly to exhaustion in this study. Hsu (2019) cautioned organisations of being aware that older workers can face more barriers and stressors at work, which can impact their engagement in work. Dolan and Kudrna (2015) investigated the relationship between exhaustion and age and found that tiredness decreases with age. Noting the relationship between age and burnout, both Brewer and Shapard (2004) and Ng and Feldman (2010) found that age is negatively related to burnout. Regarding Work-Soc, the results revealed that Work-SoC statistically significantly predicted the engaged type in comparison to the burned-out type. Similar findings were found by van der Westhuizen (2018) who concluded that Work-SoC is a strong predictor of work engagement and found that Work-SoC is negatively related work engagement. Van der Westhuizen (2018) further concluded that Work-SoC is a better predictor of work engagement compared to global SOC. This is in support of the assertion by Vogt et al. (2013) which stated Work-SoC is a predictor of work wellness.

The results pertaining to job demands revealed that this psychosocial antecedent variable statistically significantly predicted the engaged type in comparison to the burned-out type. These results are aligned to the JD-R Model (Bakker et al., 2003; Demerouti et al., 2001) which postulates that work engagement is influenced by multiple job demands. Oshio, Inoue, and Tsutsumi (2018) further support this notion and state that it is important to note that the association between job demands and work engagement may differ across the types of job demands investigated. According to the Oshio et al., (2018) work engagement is positively associated with the type of job demands termed “challenges” (such as workload and time pressures) and negatively associated with the job demands termed hindrances (such as role ambiguity). The results further concluded that job demands statistically significantly predicted the exhausted type in comparison to the burned-out type. Similar results were found by Maslach et al. (2001) who found strong correlations between job demands (heavy workload and time pressure) and exhaustion; and Rothmann and Joubert (2007) who found that exhaustion was positively related to job demands.

Next, regarding job resources, the results showed that this psychosocial antecedent variable statistically significantly predicted the engaged type in comparison to the burned-out type. Supporting evidence was found by Coetzer and Rothmann (2004) who stated that the availability of job resources increases levels of engagement and Schaufeli and Bakker (2004) who stated that work engagement is strongly predicted by job resources. Lastly, the results showed that job resources statistically significantly predicted the

exhausted type in comparison to the burned-out type. Supporting evidence was found by Bakker, Demerouti, and Euwema (2005) concluded that those possessing high job resources should experience lower levels of job-related strain and exhaustion, since the availability of job resources makes them more capable of dealing with the demands they encounter at work, and Tremblay and Messervey (2011) who stated that job resources represent characteristics of a job that moderated the relationship between job demands and exhaustion.

The results therefore revealed that the psychosocial antecedent variables of job demand, job resources and Work-SoC statistically significantly predicted engaged type more than they predicted the exhausted type in comparison to the burned-out type.

8.4.3 Research Aim 3

8.4.3.1 Predicting Positive and Negative Outcomes by Means of the Occupational Wellbeing Types

Multiple regression analysis was carried out to determine if the occupational wellbeing types were able to predict the positive and negative outcome variables (organisational commitment and turnover intention). This involved testing research hypothesis 3a.

Table 8.36 summarises the significant results of the multiple regression analyses.

Table 8.36

Relationship between Occupational Wellbeing Types and Positive and Negative Outcome Variables

Positive and Negative Outcome variables	Occupational Wellbeing Types	Parameter	SE	T	P	F (Model)	P-value (Model)	R-Squared
Organisational Commitment	Intercept	3.77	0.86	43.86	0.000	33.44	0.000	0.127
	Exhausted	0.53	0.11	4.90	0.000			
	Engaged	0.18	0.1	8.13	0.000			
Turnover	Intercept	3.15	0.66	47.63	0.000	33.44	0.000	0.183
	Exhausted	-0.66	0.08	-7.97	0.000			
	Engaged	-0.77	0.08	-10.01	0.000			

a. Reference category: Burned-out Type

The three occupational wellbeing types (exhausted, engaged and burned-out) acted as independent variables, and tried to predict organisational commitment and turnover intention as dependent variables. The burned-out type did not add a statistically significant contribution to the prediction model when the exhausted and engaged types are already included. As a result, the contribution of the burned-out type

fell away due to the contribution of the exhausted and the engaged types. 12.7% of organisational commitment can be predicted from the exhausted and engaged types, whilst 18.3% of turnover intention can be predicted from the fatigued and engaged groups. Whilst the variance for both outcome variables was not high, it can be concluded that the exhausted and fatigued types acted as significant predictors of organisational commitment, $p = 0.00$ and turnover intention, $p = 0.00$.

8.4.3.2 Determining if the Occupational Wellbeing Types Differ Significantly with regard to the Positive and Negative Outcomes

In order to determine if differences exist between the identified occupational wellbeing types (i.e. exhausted, engaged and burned-out), and the positive and negative outcomes (age, job demands, job resources and work-related sense of coherence), multivariate tests (MANOVA) was carried out. This involved testing research hypothesis 3b and 3c.

Table 8.37 below illustrates that the multivariate test is statistically significant as Pillai's Trace is significant $F = 27.969$; p value < 0.05 .

Table 8.37
Significance of the multivariate test

Effect		Value	F	Hypothesis df	Error df	Sig.	η^2
Intercept	Pillai's Trace	0.99	15843.22 ^{b*}	2.00	457.00	0.00	0.99
	Wilks' Lambda	0.01	15843.22 ^{b*}	2.00	457.00	0.00	0.99
	Hotelling's Trace	69.34	15843.22 ^{b*}	2.00	457.00	0.00	0.99
	Roy's Largest Root	69.34	15843.22 ^{b*}	2.00	457.00	0.00	0.99
QCL_1	Pillai's Trace	0.22	27.70	4.00	916.00	0.00	0.11
	Wilks' Lambda	0.78	29.50 ^{b*}	4.00	914.00	0.00	0.11
	Hotelling's Trace	0.72	31.03	4.00	912.00	0.00	0.12
	Roy's Largest Root	0.26	60.01 ^{b*}	2.00	458.00	0.00	0.21

Subsequently, a Univariate test was carried out to determine the differences between the occupational wellbeing types. The results are displayed in Table 8.38 below.

Table 8.38

MANOVA with occupational wellbeing types as independent variables (n=461)

		Sum of Squares	Df	Mean Square	F	Sig.
Organisational Commitment	Contrast	41.15	2	20.57	33.44	0.00
	Error	281.81	458	0.62		
Turnover Intention	Contrast	37.21	2	18.61	51.29	0.00
	Error	166.15	458	0.36		

Table 8.38 illustrates that the univariate ratio of occupational wellbeing types differed significantly on the scores for organisational commitment $F(2) = 33.44, p < 0.05$ and turnover intention $F(2) = 51.29, p < 0.05$. Table 8.39 below shows the descriptive statistics for each identified occupational wellbeing type, for organisational commitment and turnover intention.

Table 8.39

Descriptive statistics for each type, organisational commitment and turnover intention (n=461)

	Cluster	Mean	Std. Error
Organisational Commitment	Exhausted	4.31	0.07
	Engaged	4.59	0.05
	Burned-Out	3.78	0.09
Turnover Intention	Exhausted	2.49	0.05
	Engaged	2.38	0.04
	Burned-Out	3.15	0.07

The results of the specific differences between the occupational wellbeing types and the positive and negative outcomes are shown Table 8.40 below.

Table 8.40

Pairwise comparisons between occupational wellbeing types and positive and negative outcome variables

	(I) Cluster no. of case	(J) Cluster no. of case	Mean diff. (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b Lower Bound	95% Confidence Interval for Difference Upper Bound
Organisational Commitment	Exhausted	Engaged	-0.28*	0.08	0.00	-0.48	-0.08
		Burned-Out	0.53*	0.11	0.00	0.27	0.79
	Engaged	Exhausted	0.28*	0.08	0.00	0.08	0.48
		Burned-Out	0.81*	0.10	0.00	0.57	1.05
	Burned-Out	Exhausted	-0.53*	0.11	0.00	-0.79	-0.27
		Engaged	-0.81*	0.10	0.00	-1.05	-0.57

Turnover Intention	Exhausted	Engaged	0.11	0.06	0.31	-0.05	0.26
		Burned-Out	-0.66*	0.08	0.00	-0.86	-0.46
	Engaged	Exhausted	-0.11	0.06	0.31	-0.26	0.05
		Burned-Out	-0.77*	0.08	0.00	-0.95	-0.59
	Burned-Out	Exhausted	0.66*	0.08	0.00	0.46	0.86
		Engaged	0.77*	0.08	0.00	0.58	0.95

In terms of how each of the occupational wellbeing types differ regarding the positive and negative outcomes variables, the following was revealed:

- Organisational commitment: the engaged type experienced statistically significantly, the highest levels of organisational commitment, followed by participants that belonged to the exhausted type. Those participants that belong to the burned-out type, experienced the lowest levels of organisational commitment, statistically significantly lower than the exhausted and engaged types.
- Turnover intention: The burned-out type experienced statistically significantly higher levels of turnover intention compared to the exhausted or engaged types. However, there is no statistically significant difference between the degree of turnover intention between the exhausted and engaged types.

Based on the above, it may be concluded that there is a statistically significant difference between all three types (exhausted, engaged and burned-out) with regards to their experience of organisational commitment, however, in terms of the level of turnover intention, there is only a statistically significant difference with regard to the burned-out type, as the engaged and exhausted types cannot be statistically significantly distinguished based on their level of turnover intention.

8.4.3.3 Integration and Discussion of the MANOVA and Multiple Regression Analysis

Research aim 3 and Tables 8.36 to 8.40 are of relevance to this section.

Research aim 3: To determine whether the occupational wellbeing type combinations positively and significantly predict the positive and negative outcome variables (organisational commitment and turnover intention). This relates to H3a, H3b and H3c.

The results obtained yielded support for research hypothesis 3a and 3b and 3c.

Firstly, in terms of the occupational wellbeing types positively and significantly predicting the positive and negative outcomes (organisational commitment and turnover intention), the results revealed that the occupational wellbeing types; exhausted and engaged types statistically significantly predicted both organisational commitment and turnover intention. It is however important to note that the variance was not large, and therefore other positive and negative outcome variables may be more successfully predicted by the occupational wellbeing types. A strong correlation between engagement and organisational commitment was found by Richardson, Burke, and Martinussen (2006) who stated that engagement appears to have a positive outcome for employees, i.e. that of organisational commitment. In terms of the relationship between the exhausted type and organisational commitment, Rasli, Yusoff, and Malik (2014) found that exhaustion has a negative relationship with organisational commitment, which means that as the level of exhaustion increases the level of commitment decreases. Numerous other studies have further identified that exhaustion has a negative affect on employee's behaviour and subsequently resulted in negative consequences such as reducing job involvement and commitment (Jackson & Maslach, 1982; Leiter & Maslach, 1988; Shirom, 1989; Wright & Bonett, 1997; Wright & Cropanzano, 1998).

Next, regarding the occupational wellbeing types differing significantly with regard to organisational commitment, the results showed that the engaged type experienced the highest levels of organisational commitment, followed by those belonging to the exhausted type. The burned-out type experienced the lowest levels of organisational commitment.

Lastly, in terms of the occupational wellbeing types differing significantly with regard to turnover intention, the results revealed that the burned-out type has a statistically significantly higher level of turnover intention compared to the exhausted or engaged type. Rothmann and Joubert (2007) confirmed that burnout is negatively related to an employee's intention to remain in an organisation. However, there is no statistically significant difference between the degree of turnover intention between the exhausted and engaged types in this study. In other words, even though the burned-out group wants to leave the organisation, there is no difference in the degree to which the engaged and exhausted types consider leaving the organisation.

8.4.4 Research Aim 4

8.4.4.1 Determining if the Occupational Wellbeing Types moderate the relationship between the Psychosocial Antecedent Variables and the Positive and Negative Outcome Variables

Hierarchical moderated regression analysis was carried out to determine if the occupational wellbeing types moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and the positive and negative outcome variables (organisational commitment and turnover intention, in order to draw conclusions regarding the nomological net of the identified occupational wellbeing types. This involved testing research hypothesis 4.

The following six hypothesised moderation models, emanating from the indirect relationships between the variables were tested:

- **Model 1** tested is the occupational wellbeing types moderated the relationship between job resources and turnover intention
- **Model 2** tested if the occupational wellbeing types moderated the relationship between Work-SoC and organisational commitment
- **Model 3** tested if the occupational wellbeing types moderated the relationship between Work-SoC and turnover intention
- **Model 4** tested if the occupational wellbeing types moderated the relationship between job resources and organisational commitment
- **Model 5** tested if the occupational wellbeing types moderated the relationship between job demands and turnover intention
- **Model 6** tested if the occupational wellbeing types moderated the relationship between job demands and organisational commitment

A three-step process was followed to analyse each of the models. First, the original (unmoderated) equation demonstrating the extent to which Y is predicted by X was estimated. Thereafter, the moderated

relationship (original equation plus moderator variable) was determined. Next, the change in R^2 was considered. The existence of a significant moderator affect was then confirmed if the change was found to be statistically significant. A statistically significant ($p \leq 0.05$) result indicated a moderation affect and the conditional effects of the significant models were discussed.

The three-step process run on the above 6 models revealed that results for models 1, 2 and 3 were significant, whilst the results for models 4, 5 and 6 were not significant and no moderation were detected in these models. The results for models 1, 2 and 3 will be discussed below. The exhausted occupational wellbeing type was used as the reference category for this analysis.

8.4.4.2 Determining if the Occupational Wellbeing Types Moderated the Relationship Between Job Resources and Turnover Intention

Table 8.41 below summarises the results for Model 1.

Table 8.41
Regression coefficients for Model 1

Model Summary	R- sq	F	df1	df2	P	
Model 1	0.22	25.79	5.00	455.00	0.000	
Model	β	SE	T	P	LLCI	ULCI
Constant	2.50	0.05	49.85	0.000	2.40	2.60
Job Resources	0.29	0.15	1.97	0.049	0.00	0.58
Engaged	-0.07	0.06	-1.01	0.313	-0.19	0.06
Burned-Out	0.72	0.10	7.42	0.000	0.53	0.91
Engaged vs Exhausted	-0.72	0.18	-3.96	0.000	-1.08	-0.36
Burned-out vs Exhausted	-0.05	0.24	-0.20	0.839	-0.52	0.42
Change in R ²	R2-chng	F	df1	df2	P	
Engaged vs Exhausted by Job resources	0.03	10.02	2.00	455.00	0.000	
Conditional effects						
Type	Effect	SE	t	P	LLCI	ULCI
Exhausted	0.29	0.15	1.97	0.049	0.00	0.58
Engaged	-0.43	0.11	-4.06	0.000	-0.64	-0.22
Burned-Out	0.24	0.19	1.30	0.196	-0.13	-0.61

$n = 461, p \leq 0.05$

Table 8.41 above shows that the model summary for Model 1, testing to determine if the occupational wellbeing types moderate the relationship between job resources and turnover intention is significant, $F(5.455) = 25.79, p = 0.000, R^2 = 0.22$.

The results further showed that the interaction effect between the engaged type vs exhausted type moderated the relationship between job resources and turnover intention ($\beta = -0.72, t = -3.96, p = 0.000$), whilst the interaction effect between the burned-out type vs exhausted did not moderate the relationship between job resources and turnover intention ($\beta = -0.05, t = -0.20, p = 0.839$). The change in R^2 showed that the interaction adds around 3.4%, which can be seen as a large effect.

Figure 8.2 shows the interaction effect between the engaged vs exhausted type and the relationship between job resources and turnover intention.

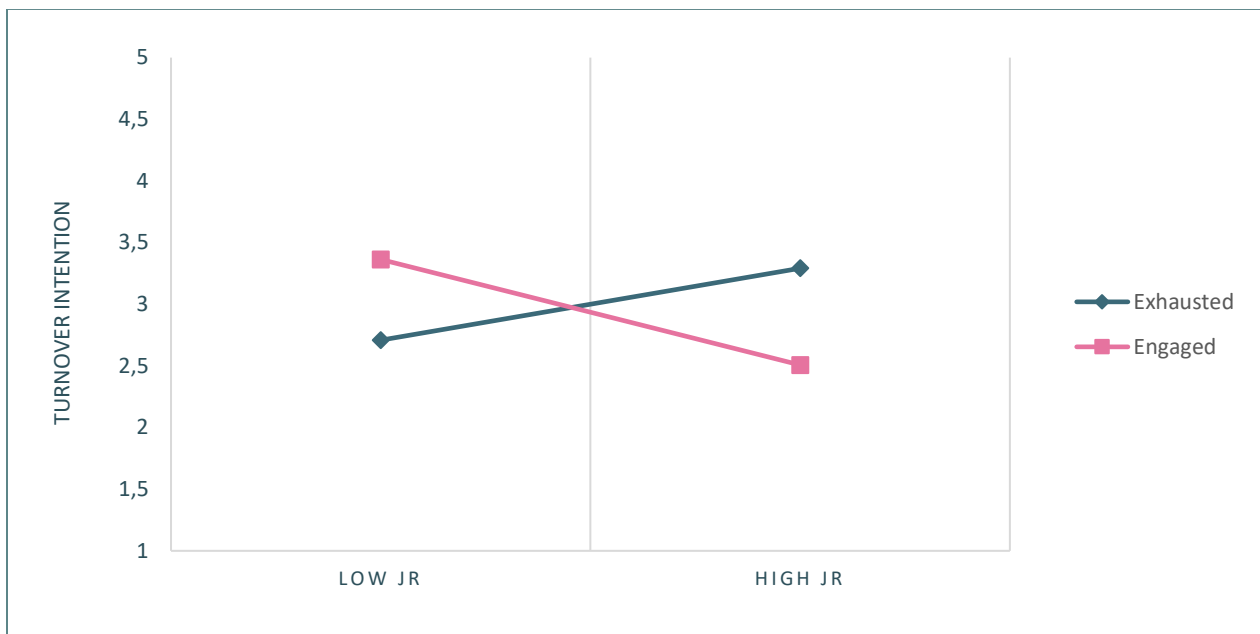


Figure 8.2. Interaction effect between the engaged vs exhausted type and the relationship between job resources and turnover intention.

From figure 8.2 above it is evident that higher job resources will result in lower turnover intention, but only for the engaged type. For the exhausted type, higher job resources may lead to higher turnover intention. Which is contrary to expectation. It seems that as one moves from the exhausted to the

engaged type, job resources will show a buffering affect with turnover intention. ($\beta = -0.43$, $t = -4.06$, $p = 0.000$).

In conclusion, job resources will buffer turnover intention to a significant degree when you are in the engaged type group.

8.4.4.3 Determining if the Occupational Wellbeing Types Moderated the Relationship Between Work-SoC and Organisational Commitment

Table 8.42 below summarises the results for Model 2.

Table 8.42
Regression coefficients for Model 2

Model Summary	R- sq	F	df1	df2	P	
Model 2	0.24	28.44	5.00	455.00	0.000	
Model	β	SE	T	P	LLCI	ULCI
Constant	4.32	0.07	66.14	0.000	4.19	4.45
Work-SoC	0.04	0.07	0.61	0.55	-0.10	0.19
Engaged	0.12	0.08	1.47	0.14	-0.04	0.29
Burned-Out	-0.33	0.11	-2.96	0.00	-0.55	-0.11
Engaged vs Exhausted	0.34	0.09	3.57	0.00	0.15	0.52
Burned-out vs Exhausted	0.30	0.10	2.96	0.00	0.10	0.50
Change in R ²	R2-chng	F	df1	df2	P	
Engaged and burned-out vs Exhausted by Work-SoC	0.02	7.04	2.00	455.00	0.001	
Conditional effects	Effect	SE	T	P	LLCI	ULCI
Exhausted	0.04	0.07	0.60	0.545	-0.10	0.19
Engaged	0.38	0.06	6.47	0.000	0.27	0.50
Burned-Out	0.35	0.07	4.88	0.000	0.21	0.49

$n = 461$, $p \leq 0.05$

Table 8.42 above shows that the model summary for Model 2, testing to determine if the occupational wellbeing types moderate the relationship between Work-SoC and organisational commitment is significant, $F(5.45) = 28.44$, $p = 0.000$, $R^2 = 0.24$.

The results further showed that the interaction affect between the engaged type vs exhausted type moderated the relationship between Work-SoC and organisational commitment ($\beta = 0.36$, $t = 3.57$, $p =$

0.000), and the interaction effect between the burned-out type vs exhausted type also moderated the relationship between Work-SoC and organisational commitment ($\beta = 0.30$, $t = 2.96$, $p = 0.000$).

The change in R^2 showed that the interaction adds around 2.4%, which reflects as a significant effect.

Figures 8.3 and 8.4 displays the interaction effects.

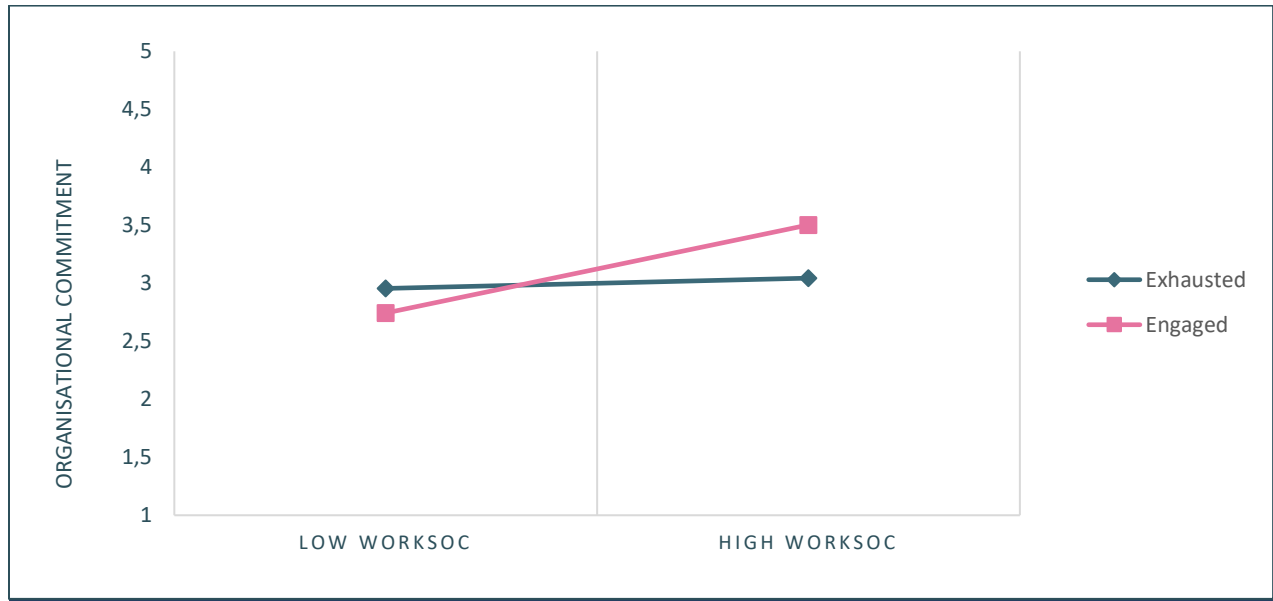


Figure 8.3. Interaction effects between the exhausted and engaged types and the relationship between Work-SoC and organisational commitment.

From figure 8.3, it is evident that Work-SoC does not significantly predict organisational commitment for the exhausted type. But as one moves from the exhausted to the engaged type, Work-SoC will start to significantly predict organisational commitment, having a boosting or amplifying effect. For the engaged type, higher Work-SoC will be associated with higher organisational commitment, but not for the exhausted type.

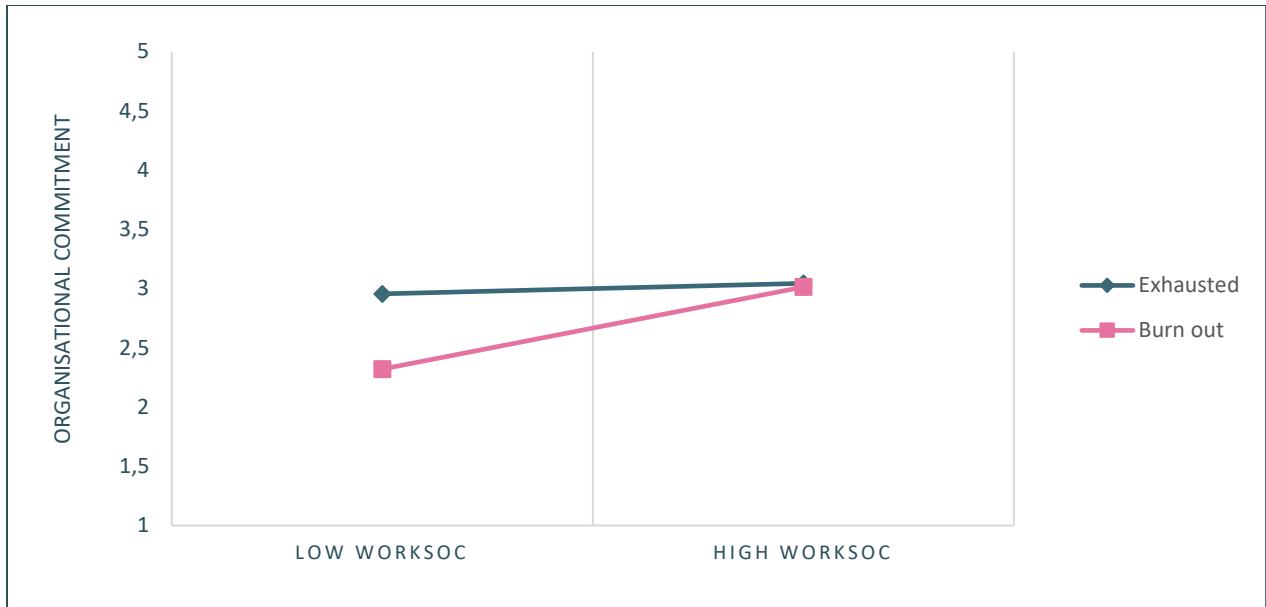


Figure 8.4. Interaction effects between the exhausted and burned-out types and the relationship between Work-SoC and organisational commitment.

When moving from the exhausted to the burned-out type, the rate of change for Work-SoC predicting organisational commitment is significantly different ($\beta = 0.347$, $t = 4882$, $p = 0.000$). This means that as one moves from the exhausted to the burned-out type group, Work-SoC will start to significantly predict organisational commitment, having a boosting or amplifying effect. Higher Work-SoC will be associated with higher organisational commitment, but only for the burned-out type and not for the exhausted type.

In conclusion, Work-SoC will significantly predict organisational commitment when you are in the engaged type group or burned-out type group, but not significantly when you are in the exhausted type group.

8.4.4.4 Determining if the Occupational Wellbeing Types Moderated the Relationship Between Work-SoC and Turnover Intention

Table 8.43 below summarises the results for Model 3.

Table 8.43

Regression coefficients for Model 3

Model Summary	R- sq	F	df1	df2	P	
Model 3	0.23	27.65	5.00	455.00	0.000	
Model	B	SE	t	P	LLCI	ULCI
Constant	2.48	0.05	47.75	0.000	2.38	2.59
Work-SoC	-0.00	0.06	-0.06	0.949	-0.12	0.11
Engaged	-0.02	0.07	-0.26	0.794	-0.15	0.11
Burned-Out	0.58	0.09	6.46	0.000	0.40	0.75
Engaged vs Exhausted	-0.22	0.08	-2.97	0.003	-0.37	-0.08
Burned-out vs Exhausted	-0.14	0.08	-1.70	0.089	-0.30	0.02
Change in R ²	R2-chng	F	df1	df2	P	
Engaged vs Exhausted by Work-SoC	0.02	4.41	2.00	455.00	0.013	
Conditional effects						
Type	Effect	SE	t	P	LLCI	ULCI
Exhausted	-0.00	0.06	-0.06	0.949	-0.12	0.11
Engaged	-0.23	0.05	-4.83	0.000	-0.32	-0.13
Burned-Out	-0.14	0.06	-2.52	0.012	-0.25	-0.03

$n = 461, p \leq 0.05$

Table 8.43 above shows that the model summary for Model 3, testing to determine if the occupational wellbeing types moderate the relationship between Work-SoC and turnover intention is significant, $F(5.46) = 27.65, p = 0.000, R^2 = 0.23$.

The results further showed that the interaction affect between the engaged type vs exhausted type moderated the relationship between Work-SoC and turnover intention ($\beta = -0.22, t = -2.97, p = 0.003$), whilst the interaction affect between the burned-out type vs exhausted did not moderate the relationship between Work-SoC and turnover intention ($\beta = -0.14, t = -1.70, p = 0.089$).

The change in R^2 showed that the interaction adds around 1.5%, which can be seen as a moderate effect.

Figure 8.5 shows the interaction effect.

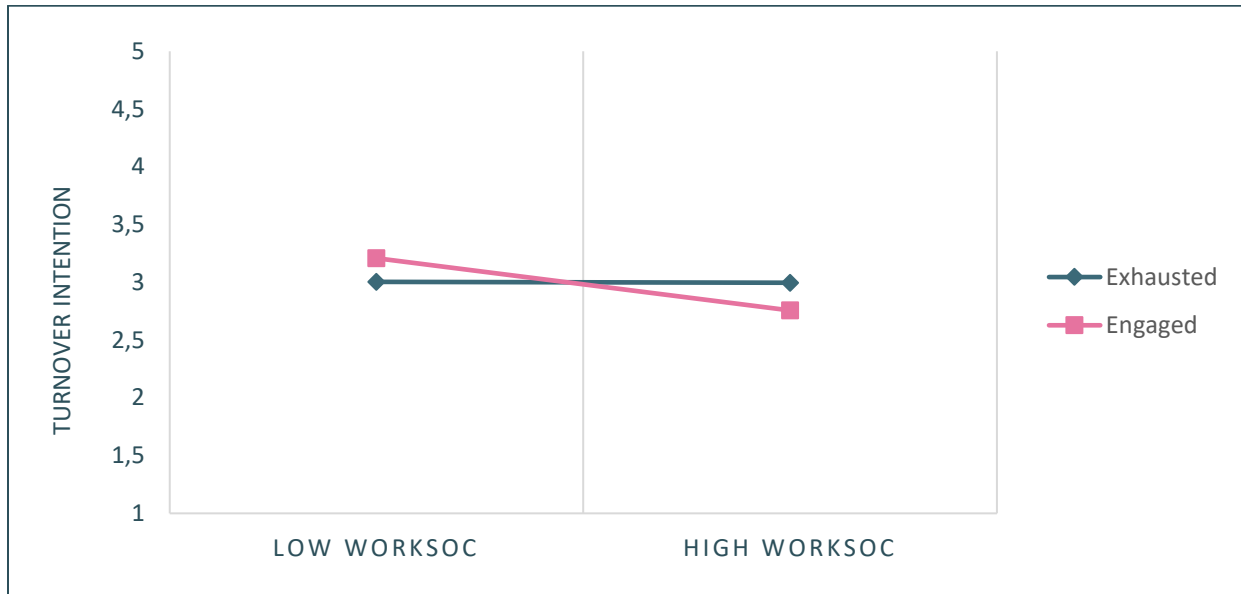


Figure 8.5. Interaction effects between the exhausted and engaged types and the relationship between Work-SoC and turnover intention.

From figure 8.5 it can be seen that when moving from the exhausted to the engaged type, the rate of change of Work-SoC predicting turnover intention is significantly different. ($\beta = -0.226$, $t = -4.834$, $p = 0.000$). This means that as one moves from the exhausted to the engaged type, Work-SoC will start to predict turnover intention more strongly, having a buffering effect. Higher Work-SoC will be associated with lower turnover intention, but only for the engaged type.

In conclusion, Work-SoC will buffer the association with turnover intention to a significant degree when you are in the engaged type group, but not significantly when you are in the burned-out or exhausted type groups.

8.4.4.5 Integration and Discussion of the Hierarchical Moderated Regression Analysis

Research aim 4, Tables 8. 41 to 8.43 and Figures 8.2 to 8.5 are of relevance to this section.

Research aim 4: To determine if the occupational wellbeing types moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and the positive and negative outcome variables (organisational commitment and turnover intention, in

order to draw conclusions regarding the nomological net of the identified occupational wellbeing types. This relates to H4. The results yielded partial support for research hypothesis 4.

The results first revealed that only three of the original six moderation models were significant. This meant that the researcher was only able to determine the moderating relationship between the occupational wellbeing types and two of the psychological antecedent variables (i.e. job resources and work-related sense of coherence). The relationship between job demands on the one hand and organisational commitment and turnover intention on the other was not moderated by the occupational wellbeing types.

In summary, the results show that each of the occupational wellbeing types plays a significant role by moderating the relationship between the psychosocial antecedent variables of job resources and work-related sense of coherence, and the positive and negative outcomes of organisational commitment and turnover intention.

Regarding the exhausted type, the nomological relationships reveal that this type significantly moderates the relationship between job resources and turnover intention. However, this relationship was contrary to what can be expected from literature. This may warrant further investigation in future. The JD-R model suggests that job demands are hypothesised to be a more significant predictor of exhaustion than job resources (Demerouti et al., 2001). The prediction of stronger associations for job demands relative to job resources were further confirmed by Lee and Ashforth (1996). However, it is important to note that studies by Bakker, Demerouti, and Verbeke (2004) and Schaufeli and Bakker (2004), state that job resources still remain relevant in predicting exhaustion. Literature notes that demanding work environments, increases the risk of exhaustion, and subsequently burnout which further is associated with higher rates of turnover intention (Scanlan & Still, 2019).

In terms of the engaged type, the nomological net shows that this type significantly moderates the relationship between job resources and turnover intention, between work-related sense of coherence and organisational commitment and between work-related sense of coherence and turnover intention. The relationship between work engagement, job resources and turnover intention has been widely acknowledged in literature. Sonnentag (2017) states that engagement necessitates favourable work conditions, in the form of job resources. In line with this assertion, employees that have high levels of job

resources, tend to be highly engaged, even when they may not experience positive task characteristics (Sonnentag, 2017). Furthermore, high levels of work engagement have been shown lead to various positive workplace outcomes, such as; job satisfaction, loyalty and commitment to the organisation (Gallup, 2013). Bothma and Roodt (2012) further noted that work engagement could lead to job performance and satisfaction, organisational commitment and reduced rates of turnover intention. Although a relatively new concept, links between work engagement, work-related sense of coherence, organisational commitment and turnover intention have been noted in previous studies. Bauer et al. (2015) and Vogt et al. (2013) stated that initial studies on Work-SoC have shown that the construct is correlated with job resources, organisational commitment, work enthusiasm and mental health. A study by Vogt (2014) study also found a strong positive mediating affect of Work-SoC between job resources and work engagement. Van der Westhuizen (2018) further concluded that work-related sense of coherence was a strong predictor of work engagement. According to Bezuidenhout and Cilliers (2010), when employees believe that resources available to them are adequate to meet the demands, they face in the work context, they are able to engage in their work. In this regard, Work-SoC is seen to result in a positive perception of job resources and consequently positively impacts the relationship between job resources and work engagement.

Finally, the nomological net for the burned-out type indicated that this type significantly moderates the relationship between work-related sense of coherence and organisational commitment. Yam and Shiu (2003) analysed sense of coherence and concluded that SOC acts as a protective factor in relation to stress perceptions arising from the work environment. This may be attributed to the fact that Burnout is seen as an aspect that influence's a person's wellbeing negatively, whilst sense of coherence conversely forms an important part of a person's health (Rothmann et al., 2005; Van der Colff & Rothmann, 2009). Van der Colff and Rothmann (2009) similarly found and concluded that a strong sense of general sense of coherence predicted lower levels of burnout. Earlier studies by Levert, Lucas, and Ortlepp (2000) also found significant correlations between burnout and a strong sense of coherence whilst Roothman, Kirsten, and Wissing (2003) found that sense of coherence has a moderating affect on stress and burnout. Based on the above, it seems plausible to conclude that employees that have a strong sense of coherence will resultantly experience lower levels of burnout, which is likely to result in their commitment to remain in their organisations.

It can therefore be concluded that all occupational wellbeing types are moderators in the relationship between job resources and work-related sense coherence on the one hand, and organisational commitment and turnover intention on the other, with the engaged type moderating the most relationships.

8.5 SYNTHESIS: DETERMINING OCCUPATIONAL WELLBEING TYPES IN THE HEALTHCARE INDUSTRY IN SOUTH AFRICA

The central hypothesis of this study is that this research may prove useful in empirically testing the circumplex model of affective wellbeing. This was achieved by identifying occupational wellbeing types that cluster as a result of variables that can be plotted on the circumplex model of wellbeing (burnout work engagement, workaholism and job satisfaction) and determining their relationships with psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) as well as with positive and negative outcome variables (organisational commitment and turnover intention). The culmination of knowledge derived from the relationship between the occupational wellbeing types, psychosocial antecedent variables and outcome variables of the subjects served the purpose of determining the nomological net for each of the identified occupational types.

This study was not able to replicate the four occupational wellbeing types as per the original circumplex model, but instead found support for three wellbeing types, namely, Exhausted, Engaged and Burned-Out. The workaholism type did not emerge as in this study, there were no statistically significant differences between the types of workaholism scores. The study further found that the engaged type displayed the highest levels of engagement in their jobs, the engaged and exhausted types spend more time working and experienced higher levels of job satisfaction, and lastly, the exhausted and burned-out types showed the highest levels of burnout.

In terms of the relationship between the occupational wellbeing types (i.e. exhausted, engaged and burned-out) with the psychosocial antecedent variables, the results firstly showed that age groups were equally represented in each of the types. It was concluded that this could be owing to the fact that there were only three age groups in this study, and as a result, the range of the age groups were large. It was further found that the exhausted type experienced the highest levels of job demands, however, this group also experienced higher levels of job resources and Work-SoC than the burned-out type. The engaged

type experienced lower job demands than the exhausted group, but not lower job demands than the burned-out type. Lastly, the engaged type then experienced the highest level of job resources and Work-SoC compared to all three types.

The study further sought to determine if the psychosocial antecedent variables were able to predict the occupational wellbeing types. Results showed that the psychosocial antecedent variables of job demand, job resources and Work-SoC statistically significantly predicted engaged type more than they predicted the exhausted type in comparison to the burned-out type.

In terms of the positive and negative outcome variables, the study explored if the occupational wellbeing types were able to both predict and determine organisational commitment (positive outcome) and turnover intention (negative outcome). It was concluded that the exhausted and engaged types predicted both organisational commitment and turnover intention, however the variance was not large. In terms of the occupational wellbeing types differing relative to the variables, it was found that the engaged type experienced the highest levels of organisational commitment, followed by the exhausted type, and the burned-out type experienced the lowest levels of organisational commitment. Regarding turnover intention, it was found that the burned-out type displayed the highest levels of turnover intention, whilst there was no difference in levels of turnover intention between the engaged and exhausted types.

Lastly, with regard to the nomological net of the identified occupational wellbeing types it was concluded that each of the occupational wellbeing types plays a significant role by moderating the relationship between the psychosocial antecedent variables of job resources and work-related sense of coherence, and the positive and negative outcomes of organisational commitment and turnover intention. The engaged type was found to moderate most of the relationships.

8.6 CHAPTER SUMMARY

This chapter gave an overview of the statistical results that were relevant to this research and were interpreted to enable the researcher to integrate the results of the empirical research with the literature study. The results provided supportive evidence for the stated research hypotheses.

The following empirical research aims were achieved in this chapter:

Research aim 1: To conduct an empirical investigation that explores the direction and magnitude of the statistical inter-correlations between the employee wellbeing attributes (burnout, work engagement, workaholism, job satisfaction), and determine which type combinations of occupational wellbeing can be distinguished based on the measurements of burnout, work engagement, workaholism and job satisfaction. This aim relates to H1.

Research aim 2: To determine if the occupational wellbeing type combinations differ with regard to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence). This relates to H2a and H2b.

Research aim 3: To determine whether the occupational wellbeing type combinations positively and significantly predict the positive and negative outcome variables (organisational commitment and turnover intention). This relates to H3a, H3b and H3c.

Research aim 4: To determine if the occupational wellbeing types moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and the positive and negative outcome variables (organisational commitment and turnover intention, in order to draw conclusions regarding the nomological net of the identified occupational wellbeing types. This relates to H4.

CHAPTER 9

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter addresses research aim 5, namely, to draw conclusions and make recommendations for affective wellbeing practices in the healthcare industry. The chapter further makes suggestions for future research in the field based on the model that has been identified.

9.1 CONCLUSIONS

This section discusses the conclusions of the research, which stems from both the literature review and the empirical study, in accordance with the research aims that have been outlined in Chapter 1.

9.1.1 Conclusions Relating to Literature Review

The general aim of this study was to determine which occupational wellbeing types can be distinguished based on the circumplex model of wellbeing (burnout, work engagement, job satisfaction, workaholism), and to determine how these types differ with regard to psychosocial antecedents (age, job demands, job resources and work-related sense of coherence) and positive and negative outcomes (organisational commitment and turnover intention) in the health-care industry in South Africa.

The conclusions relating to the relationship dynamics between the variables will be discussed below by referring to the specific research aims of the study.

9.1.1.1 Literature Research Aim 1

The first aim, namely, to conceptualise the healthcare industry of South Africa and provide an evaluation of the current state of the industry was achieved in Chapter 2.

The following conclusions were drawn:

- The South African healthcare context is characterised by an inequitable distribution of health services (Hatcher et al., 2014).

- Healthcare institutions in the country, from both the private and public sector sectors, face numerous obstacles which impede the provision of an efficient and effective healthcare system, which as a result, impacts the wellbeing of employees.
- Some of the challenges plaguing the workers in the industry include; appalling working conditions, work of a demanding and stressful nature, dealing with life threatening injuries and illnesses, pressurised work environments, high workload, role ambiguity and challenging working environments (Armstrong & Rispel, 2015; Mayosi & Bentar, 2014; Manyisa & Aswegen, 2017; Selamu et al., 2017).
- The key factors that were identified in the literature as posing challenges to the healthcare industry, and that were discussed in Chapter 2, include; human resource challenges and employee retention, the burden of disease, infrastructure and resource challenges, increased patient load, stress, employee dissatisfaction, poor interpersonal relations between managers and employees and finally flawed communication systems. This discussion highlighted that the South African healthcare industry is a highly stressed work environment, and employees in this sector face numerous challenges which significantly impacts on their occupational wellbeing.
- It was concluded that stressful working events and environments can have serious negative effects on an employee's wellbeing, and in an effort to ensure their wellbeing, employees could choose to leave the healthcare industry (Mayosi & Bentar, 2014).
- In a bid to attaining better health and wellbeing for South African patients, a first step would be to ensure the occupational wellbeing of the healthcare workforce which includes the promotion of a healthy and supportive workplace.

9.1.1.2 *Literature Research Aim 2*

The second aim, namely, to conceptualise occupational wellbeing and its attributes of work engagement, job satisfaction, burnout, workaholism and determine which type combinations of these constructs could be determined based on the circumplex model of affective employee wellbeing was achieved in Chapter 3.

The following conclusions were drawn:

- The employee wellbeing attributes (burnout, work engagement, workaholism, job satisfaction) may be regarded as different states of occupational wellbeing that are positioned in a circular structure (i.e. the circumplex model of occupational wellbeing) (Bakker & Oerlemans, 2011). These four occupational wellbeing concepts are used to describe the multifaceted nature of employee wellbeing (Bakker & Oerlemans, 2011).
- Burnout is viewed as a specific and severe form of disturbed job-related wellbeing (Maslach & Jackson, 1981) and poses many risks to the affective/psychological, physiological and behavioural wellbeing of workers (Leiter & Maslach, 2001).
- With regard to work engagement, Bakker et al. (2008) states that at the individual level, engaged employees display high levels of energy, they are enthusiastic about their work and are immersed in the performance of their work and roles, and as a result of the positive outcomes attributed to employee engagement, most organisations are seeking to employ engaged employees (Shuck & Wollard, 2010).
- In terms of workaholism, majority of studies have concluded that workaholism is assumed to undermine employee's wellbeing (Ng et al., 2007), and is associated with poor health (Burke, 1999; 2000; Burke et al., 2004; Kanai et al., 1996; McMillan et al., 2003; Spence & Robbins, 1992; Taris et al., 2005). However, it is important to note that these results were not consistent as contradictory studies have shown that there is no difference between workaholics and non-workaholics (McMillan & O'Driscoll, 2004; Snir & Zohar, 2007).
- Regarding job satisfaction, it was concluded by Georges and Jones (2008) that an individual's health, happiness and success is most likely as a result of their job satisfaction, and being dissatisfied with one's job, is likely to adversely impact one's wellbeing and happiness. Zanzi et al. (2017) stated that simply put, job satisfaction is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs.
- Based on the employee wellbeing attributes (burnout, work engagement, workaholism, job satisfaction), previous studies have identified many different occupational wellbeing types.

- van Beek et al. (2011) found the occupational wellbeing types of workaholics, engaged workers, engaged workaholics, and non-workaholic/non-engaged workers.
- Salanova et al. (2014) found relaxed, work engaged or enthusiastic, workaholic or tense and burnout-out or fatigued types.
- Mäkikangas et al. (2015) found engaged, burned-out, ordinary and bored-out types
- Mäkikangas et al. (2013) found the types of work engagement, low increasing work engagement - average decreasing workaholism, low decreasing work engagement - low stable workaholism; and high stable work engagement – average stable workaholism.
- Mäkikangas et al. (2014) found constantly vigorous, concurrently vigorous and exhausted, and constantly exhausted.

9.1.1.3 Literature Research Aim 3

The third literature aim, namely, to conceptualise the psychosocial antecedent variables; age, job demands and resources and work-related sense of coherence and determine how these are conceptualised and explained by theoretical models in the literature was achieved in Chapter 4.

The following conclusions were drawn:

- The psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) influence or predict occupational wellbeing.
- The workforce of organisations is made up of employees that are in different phases of their careers, ranging from entry-level employees (young adulthood) to employees that have reached retirement age (James et al., 2011). Age, and the aging process can have a serious effect on the wellbeing of employees and is often overlooked by organisations (Kanfer & Ackerman, 2013; Halyley, 2012; Mäkikangas et al., 2016).
- The job demands-resources model focuses on the negative and positive indicators of employee wellbeing (Bakker & Demerouti, 2007) and states that every occupation comprises of its own, unique set of job characteristics, which may be classified as into one of two categories, namely, job demands and job resources (Bakker & Demerouti, 2016). Job demands are presumed to exhaust employees' mental and physical resources and as a result, leads to energy depletion and health problems

(Schaufeli & Taris, 2014), whilst job resources are believed to have motivational potential and therefore foster positive organisational outcomes (Schaufeli & Taris, 2014).

- Work-SoC was defined by Vogt et al. (2013) as an employee's perceived comprehensibility, manageability and meaningfulness of their current work situation, and research has shown that the stronger an individual's SOC, the greater their wellbeing (Ryland & Greenfeld, 1991).

9.1.1.4 Literature Research Aim 4

The fourth research aim, namely, to conceptualise the positive and negative outcome variables; organisational commitment and turnover intention and discuss the way theoretical models in the literature explain the variables was achieved in Chapter 5.

The following conclusions were drawn:

- The positive (organisational commitment) and negative (turnover intention) outcome variables are predicted by occupational wellbeing.
- Organisational commitment is viewed through the lens of Meyer and Allen (1991) who defined organisational commitment as one's emotional attachment to, identification with and involvement in their organisation.
- Meyer and Allen's (1990) multidimensional approach to organisational commitment is rooted in the belief that organisational commitment reflect three core dimensions affective, continuance and normative commitment.
- Turnover intention is defined by Tett and Meyer (1993) as a person's conscious and deliberate wilfulness to leave their organisation.
- The theoretical model that has received the most traction in the study of turnover intention is the Linkages Model by Mobley (1977) (Hernowo, Sekarwana, & Djuhaeni, 2018) and stated that the seven stages that need to occur before an employee achieves the intention to leave their organisation.

9.1.1.5 Literature Research Aim 5

The final research aim pertaining to the literature review, the fifth research aim, focused on the contextual integration of the employee wellbeing attributes, the psychosocial antecedent variables and the positive and negative outcome variables with a view of constructing a theoretical occupational wellbeing model, and was achieved in Chapter 6.

The following conclusions were drawn:

- The employee wellbeing attributes (burnout, work engagement, workaholism and job satisfaction) combine to form occupational wellbeing types (Salanova et al., 2014; Mäkikangas et al., 2015).
- The psychosocial antecedent variables, namely; age, job demands job resources, and work-related sense of coherence were concluded to have a have a relationship with the employee wellbeing types in study, by each of the occupational wellbeing types shown to have differed as a result of their relationship to the psychosocial antecedent variables.
 - Age-related changes were concluded to have an influencing impact on employees' occupational strain and wellbeing (Farr & Ringseis, 2002; Hedge & Borman, 2012; Kanfer & Ackerman, 2004; Kanfer, Beier, & Ackerman, 2013; Ng & Feldman, 2013).
 - A balance between the positive (job resources) and negative (job demands) were shown to impact to employee health and wellbeing (Bakker & Demerouti, 2007).
 - It was hypothesised that Work-SoC will also have a positive affect on an individual's wellbeing, as it was found that general SOC is seen as a vital source of resilience and protection to one's health (Basińska et al., 2011).
- Employee's with a high degree of organisational commitment (positive outcome), were concluded to have a higher level of employee wellbeing (Garg & Rastogi, 2009), whilst those who do not display a high level or commitment are unlikely to choose to remain with their current employers and more likely to seek alternate employment (Xu et al., 2016).
- It is essential that the implications of an occupational wellness model for the healthcare industry not be overlooked, as an understanding of the employee wellbeing attributes, psychosocial antecedent variables and positive and negative outcome variables may inform the wellness

practices which are viewed as strategies that are intended to promote the wellbeing of employees.

9.1.2 Conclusions Relating to the Empirical Study

The empirical aims of this study were to address the following:

9.1.2.1 Empirical Research Aim 1

The first empirical aim, namely, to conduct an empirical investigation that explores the direction and magnitude of the statistical inter-correlations between the employee wellbeing attributes (burnout, work engagement, workaholism, job satisfaction), and determine which type combinations of occupational wellbeing can be distinguished based on the measurements of burnout, work engagement, workaholism and job satisfaction was achieved in Chapter 8.

The results provided little supportive evidence for research hypothesis H1.

Based on the empirical results, the following core conclusions can be drawn:

Statistically significant inter-correlations exist between the employee wellbeing attributes (burnout, work engagement, workaholism, job satisfaction).

- The greatest variance between the clusters was explained by work engagement, followed by burnout, job satisfaction and lastly workaholism. Workaholism did not contribute to a large extent to any of the clusters, tying in with the lower reliability and validity scores reported in section 8.1 of the study.
- Three occupational wellbeing types were identified: exhausted, engaged and burned-out. The workaholic type (or bored-out as it was hypothesised to be called in this study) did not emerge.
- Although the construct of workaholism did not add greatly to the occupational wellbeing types, the construct was retained for further analysis in this study since it formed part of the circumplex model of occupational wellbeing.
- The exhausted type showed high levels of burnout, lower levels of work engagement and average levels for workaholism and job satisfaction.

- The exhausted type relates to the burnout dimension in the circumplex model, which is located in the unpleasant affective state of low activation (bottom left quadrant), in terms of being high on the level of burnout experienced. The exhausted type however differs in terms of showing moderate levels of job satisfaction experienced.
- The exhausted type further looks like the bored-out type found by Mäkikangas et al. (2015). No previous studies have found a type that exactly resembles the exhausted type found in this study.
- The engaged type showed high levels of work engagement, slightly higher than average levels for job satisfaction and workaholism, and low levels of burnout.
- The engaged type strongly relates to the work engagement dimension as per the circumplex model of occupational wellbeing, which is positioned in the pleasant affective state of high activation (top right quadrant).
- The burned-out type showed high levels of burnout and low levels of work engagement, workaholism and job satisfaction.
- The burned-out type resembles the burnout dimension as per the circumplex model of occupational wellbeing, which is positioned in the unpleasant affective state of low activation (bottom left quadrant).
- Salanova et al. (2014) and Mäkikangas et al. (2015) both found types similar to the engaged and burned-out types found in this study. In addition, a study by found support for a type called enthusiasm, which resembles the engaged type in this study (Mielniczuk & Laguna, 2018).
- Majority of the participants belonged to the engaged group, followed by the exhausted type, and lastly the burned-out group.
- The occupational wellbeing types found in this study are representative rather than job specific. Overlap was found with previous studies in terms of the occupational wellbeing types identified, but none of the occupational wellbeing types found in this study mirrored occupational wellbeing types from other previous studies one hundred percent.

- Stemming from the points mentioned above, it was found that the three occupational wellbeing types found in this study support the assumptions of the circumplex model, which claims four states of occupational wellbeing (burnout, work engagement, workaholism and job satisfaction) could be used to describe occupational wellbeing.

9.1.2.2 *Empirical Research Aim 2*

The second empirical aim, namely, to determine if the occupational wellbeing type combinations differ with regard to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) was achieved in Chapter 8.

The results provided partial supportive evidence for research hypothesis H2a and H2b.

- No difference amongst the age groups was found between the occupational wellbeing types (exhausted, engaged, burned-out) (i.e. any age group can fall into any of the occupational wellbeing types).
- Age did not statistically significantly predict the exhausted type or engaged type when compared to the burned-out type.
- Regarding job demands, a statistically significant difference was found between the exhausted type and the burned-out type and between the engaged type and burned-out type. The exhausted type experienced statistically significant higher job demands compared to the burned-out group, indicating that the exhausted type experienced the highest job demands. The engaged type also experienced statistically significantly higher job demands than the burned-out type. The burned-out type therefore experienced the lowest degree of job demands. There is no statistically significant difference between the degree of job demands experienced between the engaged and exhausted type.
- Job demands statistically significantly predicted the engaged and exhausted types in comparison to the burned-out types.
- In terms of job resources, there is a statistically significant difference between all three types (exhausted, engaged, burned-out) and the degree of job resources experienced. The engaged type

experienced the highest degree of job resources, followed by the exhausted type, and lastly the burned-out type who experienced the lowest degree of job resources.

- Job resources statistically predicted the engaged and exhausted types in comparison to the burned-out type.
- With regard to Work-SoC, there is a statistically significant difference between all three types (exhausted, engaged, burned out). The engaged group experienced the highest levels of Work-SoC, followed by the exhausted group, and lastly the burned-out group who experienced the lowest level of Work-SoC.
- Work-SoC statistically significantly predicted the engaged type in comparison to the burned-out type.
- The exhausted type has the highest job demands, but higher levels of job resources and Work-SoC.
- The engaged type has lower job demands than the exhausted type, but higher job demands than the burned-out group.
- The engaged type has the highest level of job resources and Work-SoC from all three types.
- The psychosocial antecedent variables of job demand, job resources and Work-SoC statistically significantly predicted engaged type more than they predicted the exhausted type in comparison to the burned-out type.

9.1.2.3 Empirical Research Aim 3

The third empirical aim, namely, to determine whether the occupational wellbeing type combinations positively and significantly predict the positive and negative outcome variables (organisational commitment and turnover intention) was achieved in Chapter 7.

The results provided partial supportive evidence or research hypothesis H3a, H3b, and H3c.

Based on the empirical results, the following core conclusions can be drawn:

- The exhausted and engaged types statistically significantly predicted organisational commitment and turnover intention, although, not to a large extent.
- In terms of organisational commitment, a statistically significant difference was found between all three occupational wellbeing types (exhausted, engaged, burned-out) and their experience of organisational commitment. The engaged type displayed the highest commitment levels, followed by the exhausted type, whilst the burned-out type showed the lowest levels of organisational commitment.
- Regarding turnover intention, there is only a statistically significant difference in terms of the burned-out type, whilst the engaged and exhausted types experienced the same levels of turnover intention. The burned-out type displayed the highest level of turnover intention.

9.1.2.4 Empirical Research Aim 4

The fourth empirical aim, namely, to determine if the occupational wellbeing types moderate the relationship between the psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and the positive and negative outcome variables (organisational commitment and turnover intention), in order to draw conclusions regarding the nomological net of the identified occupational wellbeing types was achieved in Chapter 8.

The results provided partial supportive evidence for research hypothesis 4.

Based on the empirical results, the following core conclusion can be drawn:

- Each of the occupational wellbeing types (i.e. exhausted, engaged and burned-out) moderates the relationship between the psychosocial antecedent variables of job resources and work-related sense of coherence, and the positive and negative outcomes of organisational commitment and turnover intention.
- The exhausted type significantly moderates the relationship between job resources and turnover intention.

- The engaged type significantly moderates the relationship between job resources and turnover intention, between work-related sense of coherence and organisational commitment and between work-related sense of coherence and turnover intention.
- The burned-out type indicated that this type significantly moderates the relationship between work-related sense of coherence and organisational commitment.
- The engaged type was a statistically significant moderator in the most relationships between the psychosocial antecedent variables and the positive and negative outcome variables. Hakanen et al. (2018) similarly found that work engagement was the strongest predictor of occupational wellbeing types in their study.

9.1.3 Conclusions Relating to Central Hypothesis

The central hypothesis of this study stated that the occupational wellbeing types based on a composite set of employee wellbeing attributes (burnout, work engagement, job satisfaction, and workaholism), and their relationships with the psychosocial antecedent variables (age, job demands, job resources age and work-related sense of coherence) as well as the positive and negative outcome variables (organisational commitment and turnover intention) will constitute an occupational wellness model that may be used to inform wellness practices in the healthcare industry. Furthermore, the study aimed to determine how the wellbeing types differ with regards to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), and positive and negative outcomes (organisational commitment and turnover intention). Since the empirical study provided statistically significant evidence to support the central hypothesis, the hypothesis is, therefore, accepted.

9.2 LIMITATIONS

The limitations of the literature review and the empirical study are discussed below.

9.2.1 Limitations of the Literature Review

The exploratory research into the occupational wellbeing of employees in the healthcare industry in the South African context was limited by the following aspects:

- The literature review was limited to the following: Schaufeli et al. (2002) The Utrecht Work Engagement Scale (UWES), the burnout scale by Asiswe et al. (2014), Schaufeli et al. (2006) The Dutch Work Addiction Scale (DUWAS), The Job Satisfaction Scale (JSS) by Rothmann (2010), the age of participants was determined from the socio-demographic section of the questionnaire, The Job Demands-Resources Scale (JD-RS) by Jackson and Rothmann (2005), The Work-Related Sense of Coherence (Work-SoC) Scale by Bauer (2010), The Organisational Commitment Scale (OCS) by Meyer and Allen (1991) and finally the TIS-6 (Bothma & Roodt, 2013). Other models and paradigms were mentioned but not considered in this research due to the scientific and paradigmatic boundaries of the study.
- There are numerous employee wellbeing attributes, psychosocial antecedent variables and positive and negative outcome variables; however, only 4 employee wellbeing attributes (burnout, work engagement, workaholism and job satisfaction), 4 psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), and 2 positive and negative outcome variables (organisational commitment and turnover intention) were explored in this study. For this reason, the current research was unable to provide a holistic indication of the wellbeing related factors that may potentially have an impact on the occupational wellbeing of healthcare workers in South Africa.
- Whilst a wide variety of research studies have been carried out on occupational wellbeing related variables, no research, to date, to the knowledge of the researcher has been carried out in the context of the healthcare industry of South Africa with the circumplex model of affective wellbeing. Furthermore, this research is unique as the circumplex model of emotions was applied with the aim of identifying combination types of occupational wellbeing attributes (i.e. burnout, work engagement, workaholism and job satisfaction), as well as how these types differ based on psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) and outcome variables (organisational commitment and turnover intention). This limitation made it difficult to refer to previous studies during the interpretation of the research findings.
- Occupational wellbeing encompasses a variety of different meanings, however, in this study it was limited to the notion of affective wellbeing.

9.2.2 Limitations of the Empirical Study

The following are the limitations encountered in this research in respect of the empirical study:

- In terms of the sample size, a larger sample with more a more representative spread in terms of age, gender, race educational background and occupation would have been preferable. A sample size of 461 may not be large enough, as only healthcare workers in the Kwa-Zulu Natal region were approached and participation was voluntary, to establish if there is a definite relationship between the employee wellbeing attributes (work engagement, burnout, workaholism and job satisfaction), psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), and positive and negative outcome variables (organisational commitment and turnover intention).
- The sample comprised of mainly black African females, aged between 31 and 45, from the nursing occupation group, which limited the generalisability of the results to the larger South African population.
- The inclusion/exclusion criteria for the purposeful sampling method (participants were required to be working South African adults, employed in the healthcare industry) was seen as a limitation as it impeded the generalisability of the results to the broader South African working adult population.
- The sample was cross-sectional in nature and therefore, it was not possible to determine the casual directions of the relations between the variables.
- The measuring instruments (UWES, burnout scale, DUWAS, JSS the age of participants, JDRS, Work-Soc, OCS, TIS-6) are self-report questionnaires, which meant that the results obtained were based on the views, insights and experiences of the participants, which could possibly have prejudiced the validity of the research results.
- The overall reliability for the DUWAS, JSS, JDRS and TIS-6 was low, and was therefore a limitation on the interpretation of the research outcomes.
- Workaholism did not contribute to a large extent to the three clusters (i.e. the occupational wellbeing types of exhausted, engaged and burned out, however, it was retained owing to the fact that it forms

part of the circumplex model of emotions which was used to identify the occupational wellbeing types.

Despite the above-mentioned limitations, it may be concluded that the results of the study contributed valuable and new knowledge on the occupational wellbeing practices in the South African healthcare environment. Furthermore, this study affords future researchers' opportunities by providing insights into the relationships between the variables that influence the occupational wellbeing of healthcare workers.

9.3 RECOMMENDATIONS

Based on the research findings, conclusions and the limitations of this study, the following recommendations for industrial and organisational psychology and for additional research are suggested.

9.3.1 Recommendations for the Healthcare Institutions Investigated in this Study

Recommendations are made below for the healthcare institutions that participated in this study, by suggesting interventions that could be implemented at the individual and organisational level for each of the occupational wellbeing types identified in this study.

For the exhausted type, it seems that one can investigate their experience of high levels of job demands, more than the other types identified in this study. It also seems that the distinguishing factors between the exhausted and burned-out types are their level of job resources experienced and level of Work-SoC. The institution can therefore take specific care to enhance the job resources and Work-SoC of the exhausted type, to continue to buffer against being burned-out completely.

For the burned-out type, it seems that the amount of job demands is not a significant contributor to them being burned-out, since they experienced the lowest level of job demands of all three types. The institution should however take care to invest in the development of this types' Work-SoC and amount of job resources experienced as much as possible.

For the engaged type, it seems that they currently experience an ideal ratio in terms of their amount of job demands and job resources experienced. Although they may experience job demands, they experience the highest amount of job resources and also show the highest level of Work-SoC of all three

types. More research could be done to investigate this group in detail to see how employees currently clustered in the other types could be aided to form part of this engaged group.

More specific recommendations for the healthcare institution are outlined in Table 9.1 below.

Table 9.1
Recommendations for HealthCare Institutions

Individual level interventions	Organisational level interventions
Exhausted Type	
<ul style="list-style-type: none"> ● Managers and supervisors should have discussions with employees to establish and better understand the source of their exhaustion (high burnout) levels and high task overload (dimension of job demands). ● Staff training and workshops including stress awareness and management courses with a focus on coping should be introduced to help exhausted employees so that they are able to learn new and affective ways of managing stress and curb the further development of burnout. These classes should promote relaxation techniques such as meditative physical exercise focusing on posture, breathing and mind focus as these techniques could also assist this group in learning how to manage and decrease their exhaustion levels. ● Employees should be encouraged to offer support to their colleagues. This could be promoted and relationships forged through team building exercises where employees will be working together in relaxed and fun environments to achieve common objectives and complete tasks. Employees who have access to personal and social support are able to effectively deal with environmental demands more easily. 	<ul style="list-style-type: none"> ● The institutions need to promote open communication between workers and the management. Such an organisational culture will enable the staff to feel comfortable to share with management the source of their high insecurity fears (a dimension of job demands). This knowledge can then be used by management to determine why this group is experiencing these and it may subsequently be addressed by the institution. ● The healthcare institutions should encourage workers to strive for and maintain work life balance by them spending minimal extra time at work, which could help prevent exhaustion build up. This group displayed moderate levels of workaholism. Chapter 3 highlighted that workaholism can manifest as spending excessive amounts of time at work. Whilst the workers belonging to this type display only moderate levels of workaholism, such endorsements from the institutions will ensure that these workaholism levels do not increase. ● The institutions need to create a positive and satisfying work culture and work conditions that encourage the employees to experience greater satisfaction levels at work. This could further assist the employees in coping better at work, elevating some of the exhaustion experienced and contribute towards maintaining the commitment levels of employees.

- Owing to the fact that this group is at high risk of burnout, these employees need to be constantly monitored in terms of ensuring that they are continuing to cope in their roles. Regular check in's by line managers could assist in this regard, as well as assembling a dedicated task team whose primary task in checking in on the wellbeing of employees and directing employees who are in need of assistance to the correct resources.
- Incentive mechanisms for employees to increase their participation in wellness intervention programmes should be introduced to motivate employees to actively work at coping effectively in their jobs.
- Organisations need to ensure that the nature of work offered to these employees is in line with the level of skills and experienced required for their roles. This will ensure that these employees are adequately equipped to carry out their work roles.

Organisational level	Individual level
Engaged Type	
<ul style="list-style-type: none"> ● Employee's with degree or diploma education level qualifications compromised most of the sample and originations need to therefore ensure that these workers are actively engaged in their work roles by providing them with stimulating work environments and challenging them, within reason, to ensure their continued high engagement. ● Since these employees showed only moderate levels of job satisfaction, the institutions should seek to understand what could be done at an individual level, to contribute to increasing the satisfaction levels of these employees. These employees could be invited to participate in focus groups to offer their personal ideas and 	<ul style="list-style-type: none"> ● Management needs to play an active role in getting to know the engaged type employees (recognition) and provide them with opportunities to grow and flourish in their environments. This will contribute to continued engagement in their work roles. ● Management at these institutions should explore how to increase the job satisfaction of the engaged employees, which could be facilitated by opening the dialogue between themselves and these employees to determine what these employees' value and could contribute to greater satisfaction. A values and engagement survey would be suggestions in this regard. ● The institutions need to ensure that these employees feel that they are treated fairly which will assist in maintaining engagement and commitment levels. This knowledge could be gained from insights

suggestions on how to improve satisfaction levels

- Discussions/information gathering should be undertaken by management to understand what could impact on these employee’s intention to leave the healthcare institutions. This information should then be used to put in preventative measures in this regard. Information in this regard could further be gathered as part of exit interviews where employees could be asked what prompted them to leave the organisation.
- These employees, who are high on social support (a dimension of job resources), can assist in offering support to the burned-out employees, by means of informational (advice) or companionship (sense of belonging) support. The institutions need to ensure that these employees needs’ in this regard continue to be met.

gained from a values survey, as was suggested above. To further ensure, and possibly increase the engagement and commitment of these employees, the institutions should encourage the involvement of the employees in decision-making, and by providing opportunities for career advancement.

- Incentives and career paths should be provided that are consistent with what motivates these employees to maintain their engagement levels and perception of fair compensation (a dimension of job resources).

Organisational level	Individual level
Burned-Out Type	
<ul style="list-style-type: none"> • Staff training and workshops should be introduced to equip staff with the knowledge needed on how to manage burnout. This should include coping skills such as relaxation techniques and social skills (such as staff support groups). • Black African females, from the nursing profession were in the majority in this sample and one would therefore expect these employees to be experiencing the most burnout, and as a result at most risk for reporting ill health. Organisations should identify what could be done on an individual 	<ul style="list-style-type: none"> • The workload of these burned-out employees needs to be stringently managed, and management at these institutions should try to assist by cutting down work time so these employees can focus on learning how to address their burnout. • Organisations could make use of a more robust organisational level intervention called cognitive-behavioural therapy (CBT). CBT is a short-term therapy technique that assists people in finding new ways to behave, thereby changing their behaviours though patterns. CBT could be beneficial in teaching these employees to develop behaviour patterns that prevents burnout.

level to assist these healthcare professionals in reducing their burnout levels and improving any health ailments faced.

- Individual counselling sessions should be offered to these employees which focus on stress management, coping skills, work and private life interface and time management.
- Coaching sessions on how to effectively deal with and manage burnout should be offered to these employees.
- These employees should further be taught through practical training exercises and sessions on how to successfully apply the resources learnt (stress management and coping skills, coaching techniques etc.) so that they are able to positively deal with stressors, which could lead to meaningful work experiences which could positively reinforce their Work-SoC levels.
- Initiatives by management to recognise and reward employees and ensuring that the institutions' benefits and compensation structure is relevant could assist in decreasing the high turnover intention levels of these employees, and additionally increase their perception levels of job resources (compensation).
- Institutions need to understand the reasons for low engagement and job satisfaction of these employees. Culture surveys could be beneficial in this regard.
- The institutions should consider changing aspects of their culture and working practices to effectively be able to prevent future burnout cases and help reduce current burnout experienced. Knowledge gained from the culture surveys mentioned above will be beneficial in this regard.
- The organisation needs to put in place measures to address the social support (dimension of job resources) of these employees at the emotional (e.g. nurturance), informational (e.g. advice), companionship (e.g. sense of belonging) and tangible (e.g. financial assistance) and intangible (e.g. personal advice) level.

9.3.2 Recommendations for Industrial and Organisational Psychology

The following recommendations are made for the field of industrial and organisational psychology:

Firstly, organisations should allow individual employees to evaluate their occupational wellbeing on a regular basis to establish their levels of burnout, work engagement, workaholism and job satisfaction. In doing so, employees will be made aware of the support that they need to find to ensure occupational wellbeing. Furthermore, organisations will become aware of how their employees measure on these

employee wellbeing dimensions. Next, organisations should establish the job demands that employees are faced with as well as the job resources that are available to them. Understanding these factors will assist organisations in devising strategies that promote occupational wellbeing.

Having regular discussions with individual employees in order to foster an open relationship and understanding of their commitment and turnover intention levels. This knowledge can then be used to improve both the commitment and turnover levels of the organisation. Since this study did not find a statistically strong relationship between the occupational wellbeing types and the outcomes of organisational commitment and turnover intention, it is also recommended that organisations research other possible outcomes that could stem as a result of the occupational wellbeing types. In addition, it is recommended that for improved occupational wellbeing of healthcare workers, these institutions need to play closer attention to improving the work environments for these employees.

Next, training should be provided to management regarding the job demands and resources model and the implications in terms of employee outcomes. This should assist management in being able to be identifying workload and work-pace demands that are contributing to workaholic tendencies and could additionally assist in lowering burnout levels of employees.

Lastly, although the findings of this study provided a valuable understanding in terms of the research aims, it is important to determine specific interventions and ways to strengthen employees' occupational wellbeing to an organisation. Whilst this study offered recommendations to address the occupational wellbeing of employees, these was made with specific reference to the sample investigated in this study and is therefore not generalisable to other populations. Organisations need to recognise the best practices required for the occupational wellbeing of healthcare workers and it is essential that interventions be adapted to fit this specific context.

9.3.2 Recommendations for Future Research

The following recommendations are made for future research in this regard:

The sample was made up of largely middle-aged black African females from the nursing profession. To increase the generalisability of the findings for future research, studies should make use of larger heterogenous samples that are more representative of various sociodemographic and occupational

groups within the South African context. It is recommended that future longitudinal research studies be carried out to investigate the way the occupational wellbeing profile evolves with the working adult's career span.

Future research should place more emphasis on exploring the relationship dynamics between the employee wellbeing attributes (burnout, work engagement, workaholism and job satisfaction), the psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), and the positive and negative outcome variables (organisational commitment and turnover intention). The outcomes of this study allowed for a very limited understanding of these variables. Future studies such as this, which explore these variables in further detail, will equip industrial and organisational psychologists as well as human resource practitioners with further knowledge needed in this regard to refine occupational wellbeing practices at both an individual and organisational level.

This study has shown that the measurement of workaholism did not contribute to a large extent to the occupational wellbeing types and was therefore this construct did not work well in this study. Future studies should investigate a substitute to the workaholism construct that could still fit this model. Alternatives to workaholism could include investigating the impact of depression or anxiety/stress. Alternatively, future studies could concentrate on different quadrants of the circumplex model (Bakker & Oerlemans, 2011) and not on all four of them simultaneously, which would allow them to exclude the workaholism construct. Studies by Mäkikangas et al. (2013) and Mäkikangas et al. (2014) have successfully done this in the past.

The outcome variables of organisational commitment and turnover intention were not strongly predicted by the occupational wellbeing types investigated in this study. Future studies should explore other positive and negative outcome variables that could be better predicted by the occupational wellbeing types. Alternative positive outcome that could be investigated include productivity, performance, motivation and trust whilst alternate negative outcomes include employee dissatisfaction, negativity and absenteeism.

This study investigated how the occupational wellbeing types differed in as far as it pertains to the psychosocial antecedent (demographic) variable of age. Future research should explore how occupational wellbeing types differ relative to other demographic variables such as gender, job tenure etc.

Understanding the impact that other demographic levels have on the occupational wellbeing types, and consequently occupational wellbeing, will enable industrial and organisational psychologists and human resource practitioner to better develop and tailor wellbeing practices and frameworks.

It is further recommended that future research be implemented with longitudinal research designs that will facilitate the assessment of cause-and-affect relationships between the variables. Using the knowledge gained from such studies, industrial and organisational psychologists and human resource practitioners will be able to develop frameworks that could be instrumental in ensuring the occupational wellbeing of their employees.

In addition, owing to the fact that this study was cross-sectional in nature, rendering it impossible to determine the casual directions of the relations between the variables, future studies should carry out longitudinal studies to assess the relationship between the variables over time, and for these groups. Lastly, since no previous studies in South Africa have investigated the occupational wellbeing types found in this study, future studies should aim to replicate these types, thereby confirming that the types may be considered as representative.

Lastly, stemming from the fact that the exhausted type in this study was found to moderate the relationship between job resources and turnover intention, and this relationship is contrary to what is reported in literature, future studies should investigate this relationship in further detail.

9.4 EVALUATION OF THE RESEARCH

This study examined occupational wellbeing types based on a composite set of employee wellbeing attributes (comprising burnout, work engagement, workaholism and job satisfaction), and determined the extent of type differences in as far as it pertained to psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence), as well as positive and negative outcome variables (comprising organisational commitment and turnover intention). The culmination of knowledge derived from the relationship between the occupational wellbeing types, psychosocial antecedent variables and outcome variables of the subjects was used to determine the nomological net for each of

the identified occupational wellbeing types. The knowledge from the nomological net serves the purpose to potentially inform affective wellbeing practices within the healthcare industry in South Africa.

The findings from the study added value at three levels to the field of industrial and organisational psychology, namely, at theoretical, empirical and practical levels. A discussion into the value added at each of these levels follows below.

9.4.1 Value Added at a Theoretical Level

At a theoretical level, this study highlighted the importance of addressing the occupational wellbeing concerns and challenges that healthcare staff in South Africa face. The literature revealed that the South African healthcare landscape faces a myriad of challenges which impacts on the wellbeing of their staff and was therefore vital to understand what the occupational wellbeing of healthcare workers in this sector looks like, so as to be able to address and put measures in place to ensure these workers are of good health to be able to successfully carry out their duties.

The literature review provided new insights into the way in which the employee wellbeing attributes (burnout, work engagement, workaholism, job satisfaction), psychosocial antecedent variables (age, job demands, job resources, work-related sense of coherence) and the positive and negative outcome variables (organisational commitment, turnover intention) relate to individuals in the healthcare industry and illustrated the importance of considering these variables in the design and development of occupational wellbeing practices. At the time of carrying out the study, such literature was lacking.

This study further added unique value, theoretically, as it explored the value of considering age and work-related sense of coherence in the context of occupational wellbeing of healthcare workers. The researcher identified that age was not commonly explored in the context of occupational wellbeing, and work-related sense of coherence was still relatively unexplored, particularly within the South African context, and even more so within the healthcare context.

In addition, this study contributed to adding knowledge on occupation-specific occupational wellbeing types. The literature review explored previous studies that explored occupational wellbeing types, by explaining what these types looked like and their implications for workers. This study then undertook to

provide theoretical confirmation to such studies and was unique as it was done from a South African perspective.

Lastly, at a theoretical level, the integrated nomological net that was discussed and illustrated, following the comprehensive literature review, could potentially contribute to existing occupational wellbeing literature by highlighting the relationship between variables in this study, for the South African context. The insights gained from the literature review could be further used to inform affective wellbeing practices for the South African healthcare context.

At an empirical level, the contribution of this study was identifying occupational wellbeing types that cluster as a result of variables that can be plotted on the circumplex model of wellbeing. The results of this study clearly confirmed previous research regarding the relationship between all these variables, but also revealed unique results that are in line with theory, but that has not been shown by previous empirical results. In this regard, theory which predicts that wellness exist on a continuum, was revealed in the progressively downward spiral that was evident from the engaged type, to the exhausted type and lastly to the burned-out type that was identified in this study. A unique finding of this research is the exhausted type that was identified, which has not been identified to such an extent in previous studies. This confirms the wellness continuum and downward spiral that is evident from literature, but also provides a unique picture of this high-risk group of employees that may be between experiencing engagement one the one hand or burnout on the other hand.

In addition to identifying these types, another contribution was exploring the nomological net of these occupational wellbeing types. The empirical results clearly illustrated what are the antecedents to the occupational wellbeing types and the outcomes that could be predicted by the occupational wellbeing types. The information gained from the nomological net of the occupational wellbeing types is a new and unique contribution to the field of organisational psychology and adds valuable knowledge and understanding to contemporary research on employee wellbeing attributes, psychosocial antecedent variables and positive and negative outcome variables that impact on employees' health and wellness in the healthcare environment. The high-risk group of being exhausted is also clearly distinguished from the engaged type or burned-out type in terms of the degree of antecedents experienced and degree of outcomes that can be expected from this type.

The insights gained from the empirical results highlighted that within the context of the healthcare industry, age does not impact on the occupational wellbeing of workers, whilst work-related sense of coherence played a significant role in this regard, being highest in engaged workers, followed by exhausted workers and then lowest in burned-out workers. This valuable contribution should be taken into consideration when developing occupational wellbeing strategies and frameworks for the South African healthcare workers.

The study showed out that the occupational wellbeing types were not successful moderators, in terms of their nomological net, to the relationship between job demands and organisational commitment and turnover intention and additionally, to the relationship between job resources and organisational commitment. These results illustrated to future researchers the value of carrying out further research investigating these variables, to determine if the same results could be replicated.

The empirically tested nomological net of the occupational wellbeing types illustrated the important employee wellbeing attributes, psychosocial antecedent variables as well as the positive and negative outcome variables that should be taken into consideration when designing and developing occupational wellness models and strategies. As previously stated, studies on the relationship dynamics between the constructs which were relevant to this study are lacking, especially within the South African context. The conclusions drawn from the empirical study, further indicate this study is original in terms of its findings on the overall relationship dynamics between the investigated constructs and could be beneficial in enhancing the occupational wellbeing of employees within the healthcare environment of South Africa.

9.4.2 Value Added at a Practical Level

At a practical level, it was found that in the context of the South African healthcare industry investigated in this study, three occupational wellbeing types; engaged, exhausted and burned-out can be distinguished. The results revealed that within the context of the healthcare industry of South Africa, engaged workers may be best suited to this industry owing to the fact these employees show high engagement levels, a good level of job satisfaction and importantly, these employee show low levels burnout. In addition, it was revealed that engaged workers were most committed to the healthcare industry and displayed high levels of job resources and work-related sense of coherence in order to be able to successfully carry out their respective duties, and cope with the pressures associated with it.

This study highlighted the fact that employees display different levels of the employee wellbeing attributes (burnout, work engagement, workaholism and job satisfaction), psychosocial antecedent variables (job demands, job resources and work-related sense of coherence) and outcome variables (organisational commitment and turnover intention). This was apparent in the study finding varying degrees of difference in the relationships between the variables. With this in mind, it becomes important that each employee's wellbeing be treated through the lens that is appropriate for their type. The types identified clearly shows a downward spiral from being engaged, then exhausted and then burned-out. In addition to this, it seems that the level of job resources and Work-SoC are some of the most important factors to address in curbing this downward spiral.

This study fostered a realisation of the importance in understanding the outcomes, either positive or negative that can stem from an employee's occupational wellbeing and the antecedents to these types. The findings from the study in this regard will provide useful insights for future research in terms of exploring the possibility of preventing burnout and exhaustion for healthcare workers, especially black African female nurses. Furthermore, the research results contribute significantly to the body of knowledge relating to these variables in the South African healthcare context.

The nomological net of the occupational wellbeing types identified in this study, in relation to the psychosocial antecedent variables and the positive and negative outcomes, contributed to an enhanced understanding of each of the occupational wellbeing types identified in this study. Based on this understanding, recommendations were formulated for the healthcare institutions that were investigated in this study (see Table 9.1). These recommendations can be useful in advising the occupational wellness practices that are to be developed to promote the wellbeing of employees in the healthcare industry.

Finally, this study broke new ground since, to date, there have been no studies conducted with the circumplex model of occupational wellbeing being applied to identify occupational wellbeing types based on employee wellbeing attributes (burnout, work engagement, workaholism and job satisfaction), as well as how these types differ based on psychosocial antecedent variables (age, job demands, job resources and work-related sense of coherence) and positive and negative outcome variables (organisational commitment and turnover intention), especially within the healthcare environment of the South African context. The findings offered valuable information for the design of occupational wellness strategies and

interventions for healthcare workers, in particular, black African females, aged between 31 and 45 from the nursing occupation group.

9.5 CHAPTER SUMMARY

This chapter presented the conclusions and limitations of this study and made recommendations for occupational wellbeing practices and further research. The limitations were discussed with reference to the literature review and the empirical study. Recommendations for future studies, and a summary of the research was then presented, illustrating the extent to which the results of the study could provide support in constructing an occupational wellness model for healthcare workers in the South African context.

In this study, research aim 5 was consequently achieved, namely, to formulate conclusions based on the research findings and to make recommendations for industrial and organisational psychology retention practices, as well as for future research based on the findings of this study.

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