



**UNIVERSITY of the
WESTERN CAPE**

**AN INTEGRATED MODEL OF THE ROLE OF AUTHENTIC LEADERSHIP,
PSYCHOLOGICAL CAPITAL, PSYCHOLOGICAL CLIMATE AND INTENTION TO
QUIT ON EMPLOYEE WORK ENGAGEMENT – A COMPREHENSIVE ANALYSIS**



TOLUPE VICTORIA BALOGUN
**UNIVERSITY of the
WESTERN CAPE**

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor
Philosophiae in the Department of Industrial Psychology, University of the Western
Cape.

Supervisors:

Prof C. Allen-Ile
Prof B. Mahembe

DECEMBER 2017

DECLARATION

I submit this dissertation declaring that contained herein is my own work which has not been previously, partially or in its entirety submitted to obtain any qualification in any institution of learning. I am therefore the sole author of this work except for sources I have included in this work. These sources have been explicitly acknowledged and quoted as references.

Name: Tolulope Victoria Balogun

Date: 14 December 2017

Signed:



UNIVERSITY *of the*
WESTERN CAPE

ABSTRACT

Organizations exist for the primary aim of meeting particular objectives: innovation and advancement, customer satisfaction, profit making and delivery of quality goods and services. These goals are mostly channelled with the intent of demonstrating high performance crucial for the continued existence of the organization especially in these rapidly changing global economies. This target, however, cannot be achieved without the aid of employees in the organization. A plethora of previous studies have proven that efficiency, productivity, high performance and stability on the job can be better achieved when the employees are dedicated, committed to their work roles and experience work engagement. The experience of work engagement on the part of the employees is not a random event; it depends on a myriad of factors that include authentic leadership. Leaders have a cumulative change effect on their followers; hence, leaders in an organization can be termed as core drivers of employee engagement. Hence, it becomes imperative to seek to understand what authentic leadership as a construct has to offer to the workplace. Authentic leaders know what they stand for, what their value systems are and they candidly and effectively communicate these moral values to their followers. The authentic leaders through their relational transparency and self-awareness amongst their attributes are likely to engage in behaviours that promote employees' psychological capital (hope, efficacy, optimism and resilience) through an enhanced focus on employee coaching and mentoring. These leaders are likely to also cultivate a conducive psychological climate for the development of work engagement. The use of authentic leadership to influence employees' work engagement via the psychological capital and psychological climate is likely to ultimately help organizations reduce employment costs through reduced turnover intention feelings. The aim of the study was to explore, develop and test an

integrated model of relationships that exist between authentic leadership, psychological capital, psychological climate, intention to quit and work engagement.

The initial target populations for the research study were bank employees in South Africa and Nigeria. 213 completed questionnaires were collected from the Nigerian sample. However, due to data collection challenges, the South African sample was excluded from use in the study as only 40 questionnaires were returned. The study employed primary and secondary data collection. The secondary data was obtained from systematic reviews. These three systematic reviews indicated whether the relationships that existed in existing literature supports or contradicts the proposed model of relationships in the second phase of the study. The three reviews that were studied are the relationships between (i) authentic leadership and work engagement, (ii) psychological capital and work engagement, and (iii) psychological climate and work engagement. In the second part of the study, the primary research employed a cross-sectional study design which was conducted with standardized instruments and analysis was done through structural equation modeling (SEM).

Authentic Leadership was assessed using the multidimensional 16-item authentic leadership Instrument (ALI) by (Neider & Schriesheim, 2011). The ALI measures four theoretically related components which are: self-awareness, relational transparency, internalized moral perspective and, balanced processing. The 24-item PCQ developed by Luthans, Avolio, Avey, and Norman (2007) was used as the measuring instrument for Psychological Capital. The questionnaire measures the four dimensions of psychological capital which are: Self-efficacy, Hope, Resilience and Optimism. The Psychological Climate Measure developed by Brown and Leigh (1996) was used to measure the psychological climate construct. This 21-item scale was conceptualized and

developed based on Kahn's (1990) study of dimensions that predicted organizational factors that influenced employees' disengagement or engagement at work. Six factors namely, supportive management, role clarity, contribution, recognition, self-expression, and challenge were used. Intention to quit was measured with the Turnover Intention Scale (Samuel, 2017). It is a 6-item scale. Furthermore, this study validated the TI scale as no other study had previously reported on the psychometric properties and factor structure of the TI scale. Work Engagement was assessed with the Utrecht Work Engagement Scale (UWES) drawn up by Schaufeli, Salanova, Gonzales-Roma, and Bakker (2002). The three dimensions of the UWES: Vigour, Dedication, and Absorption are measured with 17 items that reflect the essential dimensions of Work engagement. However, this study used a single factor model instead of the three factor structure.

The analyses utilized in this study were: 1) Item analysis, 2) Exploratory factor analysis (EFA), 3) Confirmatory factor analysis (CFA) and 4) Structural equation modelling (SEM). Item analysis was employed to confirm the reliability of the constructs. Dimensional analysis (EFA) was carried out on each of the subscales to measure the dimensions. The aim of which was to confirm the reliability of the measuring instruments for the current sample, as well as the subscales of each instrument. Structural Equation Modelling with LISREL 8.80 was used to conduct factor analysis (CFA) and to determine the nature of the hypothesized relationships. The results indicate that Regression analysis was used to determine the moderating effect of turnover intention on the relationship between authentic leadership and work engagement.

The results indicate significant relationships between psychological capital and work engagement; work engagement and turnover (negative); authentic leadership and work

engagement; authentic leadership and psychological capital were found. No significant relationships between psychological climate and work engagement; authentic leadership and psychological climate were found. The mediating effect of psychological capital on the relationship between authentic leadership and work engagement was supported whilst the mediating effect of psychological climate on the relationship between authentic leadership and work engagement was not supported. The moderating effect of turnover intention on the relationship between authentic leadership and work engagement was not supported. The practical implications of the study, suggestions for future research and the limitations of the study have also been highlighted.



14 December 2017

UNIVERSITY *of the*
WESTERN CAPE

ACKNOWLEDGEMENTS

First, I will like to appreciate the Lord Jesus, the lover of my soul, my heavenly father, my fortress and my strength. He is my all in all. Indeed if not for His grace, I could never be where I am today. It is in Him I live; and move and have my being. All glory be unto His name forevermore.

I would like to express my heartfelt gratitude to my supervisors Professor Charles Allen-Ile and Professor Bright Mahembe. Thank you for your guidance throughout the process of this study. Professor Charles Allen-Ile, thank you for your motivation and encouragement. The assistance I received from Professor Mahembe was of great importance that despite all the intricacies involved with my work, he painstakingly guided me in the right direction regarding the analysis. I do appreciate all the time and effort you invested into improving my research and academic skills.

I would also like to extend my appreciation to my first supervisor, Dr Leon Bosman who though he had to leave UWC at some point, greatly assisted me at the initial stage of my research.

My gratitude goes to all my friends and loved ones that assisted in the data collection. Your assistance is forever cherished.

To Prof. Meshach and Esther Ogunniyi, Prof. Seyi and Funmi Amosun whom the Lord positioned as parents here for me even before I got here, thank you so much for your encouragement and oversight. May it be well with you and all yours.

Lastly, but certainly not the least, I would like to extend my love and huge appreciation to my family for the support I have received from them. To my husband and Pastor, Tolulope Adeolu, thank you for all your sacrifices in bringing this dream into reality. You have always been there for me, propelling me in all ways to be the best that I can possibly be. To our daughter, Temi “Jesusbaby”, thank you for your patience and understanding all those months of staying endlessly on campus to complete my work, and to our son, Samuel “Jesusboy” who came into our lives at the verge of completing this thesis, may you both be all that the Lord has purposed you to be. To my parents – Dotun and Ronke Kumapayi, you both are my “hero”, my mentors. Thank you for prayerfully nudging me towards this direction. Without your godly guidance, I may never have attained this height. And to my siblings, Temitope, Temitayo and Temilolu, thank you for your prayers and support over the years. Indeed, you all are the best!!!

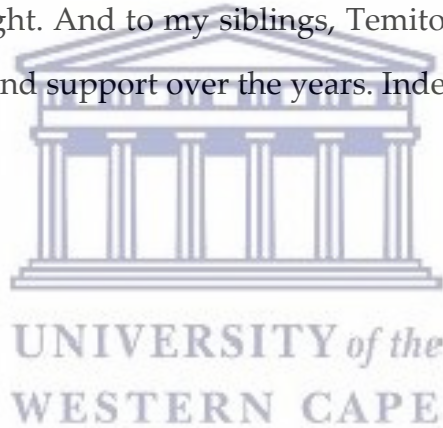
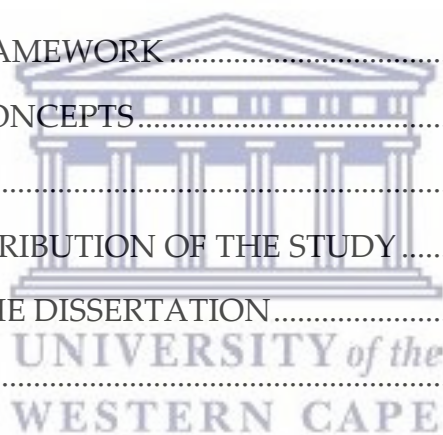


TABLE OF CONTENTS

| | |
|---|----|
| CHAPTER 1 | 1 |
| INTRODUCTION TO THE STUDY | 1 |
| 1.1 PREAMBLE | 1 |
| 1.2 INTRODUCTION..... | 1 |
| 1.2.1 Leadership is Core | 4 |
| 1.2.2 Other variables in this study | 6 |
| 1.3 BACKGROUND | 8 |
| 1.4 RESEARCH CONSTRUCT | 9 |
| 1.4.1 Employee Engagement..... | 9 |
| 1.4.1.1 Vigour | 11 |
| 1.4.1.2 Dedication | 11 |
| 1.4.1.3 Absorption..... | 11 |
| 1.4.2 Authentic Leadership..... | 12 |
| 1.4.2.1 Self-Awareness..... | 15 |
| 1.4.2.2 Relational Transparency..... | 15 |
| 1.4.2.3 Balanced Processing..... | 15 |
| 1.4.2.4 Internalized Moral perspective..... | 16 |
| 1.4.3 Psychological Capital | 16 |
| 1.4.3.1 Self-Efficacy..... | 17 |
| 1.4.3.2 Hope..... | 18 |
| 1.4.3.3 Optimism..... | 18 |
| 1.4.3.4 Resilience | 19 |
| 1.4.4 Psychological Climate | 20 |
| 1.4.4.1 Supportive Management | 21 |
| 1.4.4.2 Role Clarity | 21 |

| | | |
|-----------|---|----|
| 1.4.4.3 | Contribution..... | 21 |
| 1.4.4.4 | Recognition..... | 22 |
| 1.4.4.5 | Self-expression..... | 22 |
| 1.4.4.6 | Challenge..... | 22 |
| 1.4.5 | Intention to Quit..... | 23 |
| 1.5 | RATIONALE FOR THE RESEARCH..... | 24 |
| 1.6 | STATEMENT OF THE RESEARCH PROBLEM..... | 25 |
| 1.7 | RESEARCH QUESTIONS..... | 26 |
| 1.8 | AIM OF THE PRESENT STUDY..... | 26 |
| 1.9 | RESEARCH OBJECTIVES..... | 26 |
| 1.10 | RESEARCH HYPOTHESES..... | 27 |
| 1.11 | THEORETICAL FRAMEWORK..... | 28 |
| 1.12 | DEFINITION OF CONCEPTS..... | 29 |
| 1.13 | DELIMITATION..... | 31 |
| 1.14 | POTENTIAL CONTRIBUTION OF THE STUDY..... | 31 |
| 1.15 | STRUCTURE OF THE DISSERTATION..... | 32 |
| 1.16 | CONCLUSION..... | 33 |
| CHAPTER 2 | | 35 |
| 2 | LITERATURE REVIEW..... | 35 |
| 2.1 | INTRODUCTION..... | 35 |
| 2.2 | RELATIONSHIPS BETWEEN VARIABLES OF THE PROPOSED STUDY..... | 35 |
| 2.3 | THE RELATIONSHIP BETWEEN AUTHENTIC LEADERSHIP AND THE EMPLOYEE ENGAGEMENT OF EMPLOYEES: A SYSTEMATIC REVIEW..... | 38 |
| 2.3.1 | Introduction..... | 38 |
| 2.3.2 | A Systematic review of the relationship between authentic leadership and work engagement..... | 42 |
| 2.3.3 | Authenticity..... | 42 |



| | | |
|----------|---|----|
| 2.3.4 | Authentic Leadership | 42 |
| 2.3.4.1 | Conceptualizing Authentic Leadership (AL) | 44 |
| 2.3.4.2 | Inconsistencies, Contentions and Disputations regarding Authentic Leadership | 46 |
| 2.3.5 | Work Engagement | 47 |
| 2.3.5.1 | Definitions of Work Engagement..... | 48 |
| 2.3.5.2 | Inconsistencies, Contentions and Disputations regarding Work Engagement..... | 52 |
| 2.3.5.3 | Conceptualizing Work Engagement (WE) | 55 |
| 2.3.6 | Rationale for the review | 55 |
| 2.3.7 | Aim of the review | 56 |
| 2.3.8 | Review Question | 56 |
| 2.3.9 | Methods..... | 56 |
| 2.3.9.1 | Terms and Definitions | 56 |
| 2.3.9.2 | Article Search | 57 |
| 2.3.9.3 | Inclusion criteria..... | 58 |
| 2.3.9.4 | Exclusion criteria | 59 |
| 2.3.9.5 | Study Selection/ Search and Retrieval Process..... | 59 |
| 2.3.9.6 | Methodological quality appraisal..... | 60 |
| 2.3.9.7 | Data extraction..... | 65 |
| 2.3.10 | Results..... | 75 |
| 2.3.10.1 | Overview of reviewed studies..... | 75 |
| 2.3.10.2 | Conceptualizations..... | 76 |
| 2.3.10.3 | Measures of Assessment | 77 |
| 2.3.11 | Discussion | 78 |
| 2.3.12 | Conclusion | 81 |
| 2.4 | THE RELATIONSHIP BETWEEN PSYCHOLOGICAL CAPITAL AND THE WORK ENGAGEMENT OF EMPLOYEES: A SYSTEMATIC REVIEW | 81 |
| 2.4.1 | Introduction | 81 |
| 2.4.2 | Delineation of Psychological Capital (PsyCap) | 82 |

| | | |
|----------|---|-----|
| 2.4.3 | Inconsistencies, Contentions and Disputations regarding Psychological Capital..... | 83 |
| 2.4.4 | Conceptualizing Psychological Capital (PsyCap)..... | 84 |
| 2.4.5 | Work Engagement (WE) and Psychological Capital | 91 |
| 2.4.6 | A Systematic review of the relationship between psychological capital and work engagement | 92 |
| 2.4.7 | Rationale for the review | 93 |
| 2.4.8 | Aim of the review | 93 |
| 2.4.9 | Review Question | 93 |
| 2.4.10 | Method..... | 94 |
| 2.4.10.1 | Terms..... | 94 |
| 2.4.10.2 | Article Search | 94 |
| 2.4.10.3 | Inclusion criteria..... | 94 |
| 2.4.10.4 | Exclusion criteria | 95 |
| 2.4.10.5 | Study Selection/ Search and Retrieval Process..... | 96 |
| 2.4.10.6 | Methodological quality appraisal..... | 96 |
| 2.4.10.7 | Data extraction..... | 106 |
| 2.4.11 | Results..... | 128 |
| 2.4.11.1 | Overview of reviewed studies..... | 128 |
| 2.4.12 | Conceptualizations & measures of assessment | 130 |
| 2.4.13 | Discussion | 131 |
| 2.4.14 | Conclusion | 133 |
| 2.5 | THE RELATIONSHIP BETWEEN PSYCHOLOGICAL CLIMATE AND EMPLOYEE ENGAGEMENT: A SYSTEMATIC REVIEW | 134 |
| 2.5.1 | Introduction | 134 |
| 2.5.2 | Work Climate..... | 134 |
| 2.5.3 | Delineation of Psychological Climate (PsyClim) | 136 |
| 2.5.4 | Conceptualizing the Psychological Climate..... | 138 |

| | | |
|----------|---|-----|
| 2.5.5 | Work Engagement (WE) and Psychological Climate (PsyClim)..... | 142 |
| 2.5.6 | Work Engagement and Workaholism | 143 |
| 2.5.7 | A Systematic review of the relationship between psychological climate and work engagement | 144 |
| 2.5.8 | Rationale for the review | 144 |
| 2.5.9 | Aim of the review | 145 |
| 2.5.10 | Review Question | 145 |
| 2.5.11 | Method..... | 145 |
| 2.5.11.1 | Terms..... | 145 |
| 2.5.11.2 | Article Search | 145 |
| 2.5.11.3 | Inclusion criteria..... | 146 |
| 2.5.11.4 | Exclusion criteria | 147 |
| 2.5.11.5 | Study Selection/ Search and Retrieval Process..... | 147 |
| 2.5.11.6 | Methodological quality appraisal..... | 148 |
| 2.5.11.7 | Data extraction..... | 152 |
| 2.5.12 | Results..... | 160 |
| 2.5.12.1 | Overview of reviewed studies..... | 160 |
| 2.5.12.2 | Conceptualizations & Measures of Assessment | 161 |
| 2.5.13 | Discussion | 162 |
| 2.5.14 | Conclusion | 164 |
| 2.6 | TURNOVER INTENTION | 164 |
| 2.6.1 | Introduction | 164 |
| 2.6.2 | Definition and Background of Turnover Intention (TI) | 166 |
| 2.6.3 | Theoretical conceptualization of TI..... | 167 |
| 2.6.4 | Antecedents of TI..... | 171 |
| 2.6.4.1 | Job Satisfaction | 171 |
| 2.6.4.2 | Gender | 171 |
| 2.6.4.3 | Race..... | 171 |

| | | |
|-----------|--|-----|
| 2.6.4.4 | Age | 172 |
| 2.6.4.5 | Position/Length of Stay/ Work Experience/Tenure of Work..... | 172 |
| 2.6.4.6 | Education | 172 |
| 2.6.4.7 | Leadership..... | 173 |
| 2.6.5 | Conclusion | 173 |
| CHAPTER 3 | | 174 |
| 3 | RESEARCH DESIGN AND METHODOLOGY..... | 174 |
| 3.1 | INTRODUCTION..... | 174 |
| 3.2 | RESEARCH DESIGN AND PLAN..... | 174 |
| 3.3 | PHASE ONE:..... | 175 |
| 3.3.1 | Research Methodology..... | 175 |
| 3.3.1.1 | Systematic Reviews..... | 175 |
| 3.3.2 | Data Collection Procedure..... | 177 |
| 3.3.2.1 | Inclusion criteria:..... | 177 |
| 3.3.2.2 | Exclusion criteria:..... | 177 |
| 3.3.2.3 | Keywords:..... | 178 |
| 3.3.2.4 | Methodological quality appraisal:..... | 178 |
| 3.3.2.5 | Data extraction: | 178 |
| 3.4 | PHASE TWO:..... | 179 |
| 3.4.1 | Quantitative Design – Survey Studies | 179 |
| 3.4.2 | Evaluation of the Design - <i>Ex Post Facto</i> | 179 |
| 3.4.3 | Substantive research hypotheses | 182 |
| 3.4.4 | Statistical Hypotheses..... | 184 |
| 3.4.5 | Population and Sample | 185 |
| 3.4.6 | Sample Methods and Selection Techniques..... | 186 |
| 3.4.7 | Adequacy of the sample size..... | 186 |
| 3.4.8 | Research Participants and Sampling..... | 187 |
| 3.4.9 | Data Collection Procedure..... | 190 |

| | | |
|---------|--|-----|
| 3.5 | ETHICAL COMPLIANCE | 191 |
| 3.5.1 | Beneficence and Non-Maleficence..... | 192 |
| 3.5.2 | Informed Consent | 192 |
| 3.5.3 | Confidentiality..... | 193 |
| 3.6 | MEASURING INSTRUMENTS..... | 193 |
| 3.6.1 | Demographic Information | 194 |
| 3.6.2 | Authentic Leadership Inventory..... | 194 |
| 3.6.2.1 | Nature and Composition of the ALI | 194 |
| 3.6.2.2 | Reliability and Validity of the ALI | 195 |
| 3.6.3 | Psychological Capital Questionnaire (PCQ) | 196 |
| 3.6.3.1 | Nature and Composition of the PsyCap Questionnaire | 196 |
| 3.6.3.2 | Reliability and Validity of the PsyCap Questionnaire..... | 196 |
| 3.6.4 | Psychological Climate | 198 |
| 3.6.4.1 | Nature and Composition of the Psychological Climate Questionnaire..... | 198 |
| 3.6.4.2 | Reliability and Validity of the Psychological Climate Measure | 199 |
| 3.6.5 | Turnover Intention Scale..... | 200 |
| 3.6.5.1 | Nature and Composition of the Turnover Intention Questionnaire..... | 200 |
| 3.6.5.2 | Reliability and Validity of the Turnover Intention Scale | 200 |
| 3.6.6 | Utrecht Work Engagement Scale | 200 |
| 3.6.6.1 | Nature and Composition of the Utrecht Work Engagement Scale..... | 200 |
| 3.6.6.2 | Reliability and Validity of the Utrecht Work Engagement Scale..... | 201 |
| 3.7 | DATA ANALYSIS PROCEDURE | 202 |
| 3.7.1 | Structural Equation Modelling (SEM) | 203 |
| 3.8 | INTERPRETING THE DATA ANALYSIS ITEMS..... | 204 |
| 3.8.1 | Item analysis | 204 |
| 3.8.2 | Exploratory Factor Analysis..... | 205 |
| 3.8.3 | Kaiser-Meyer-Olkin (KMO) Test for Sampling Adequacy | 206 |
| 3.8.4 | Bartlett's Test of Sphericity..... | 207 |

| | | |
|-----------|--|-----|
| 3.8.5 | Communalities | 208 |
| 3.8.6 | Correlation Matrix | 208 |
| 3.8.7 | Total Variance Explained..... | 209 |
| 3.8.8 | Scree Plot | 209 |
| 3.9 | MODERATING AND MEDIATING EXPLAINED..... | 210 |
| 3.10 | INTERPRETING THE STRUCTURAL MODEL MODIFICATION INDICES . | 210 |
| 3.10.1 | The Gamma Matrix..... | 211 |
| 3.10.2 | The Beta Matrix | 212 |
| 3.11 | LISREL FIT STATISTICS..... | 212 |
| 3.11.1 | Model Fit Criteria..... | 213 |
| 3.11.2 | The Chi-square Statistic..... | 213 |
| 3.11.3 | The Goodness-of-fit (GFI) and the Adjusted Goodness-of-fit Index (AGFI) | 214 |
| 3.11.4 | Root Mean Square Error of Approximation (RMSEA)..... | 215 |
| 3.12 | MODEL COMPARISON CRITERIA | 216 |
| 3.12.1 | The Tucker-Lewis Index (TLI) or the Non-normed Fit Index (NNFI) | 217 |
| 3.12.2 | The Normed Fit Index..... | 218 |
| 3.12.3 | The Comparative Fit Index (CFI)..... | 218 |
| 3.12.4 | The Relative Fit Index (RFI)..... | 218 |
| 3.13 | MODEL PARSIMONY | 219 |
| 3.13.1 | The Parsimony Normed Fit Index (PFNI)..... | 219 |
| 3.14 | CONCLUSION | 219 |
| CHAPTER 4 | | 220 |
| 4 | RESEARCH RESULTS | 220 |
| 4.1 | INTRODUCTION..... | 220 |
| 4.2 | MISSING DATA | 220 |

| | | |
|---------|---|-----|
| 4.3 | ITEM ANALYSIS..... | 222 |
| 4.3.1 | Reliability Analysis of the Measuring Instruments | 222 |
| 4.3.1.1 | Reliability Analysis of the Authentic Leadership Inventory (ALI) | 222 |
| 4.3.1.2 | Reliability analysis of the Psychological Capital Questionnaire (PCQ)..... | 228 |
| 4.3.1.3 | Reliability analysis of the Psychological Climate (PCQ)..... | 233 |
| 4.3.1.4 | Reliability analysis of the Turnover Intention (TI)..... | 241 |
| 4.3.1.5 | Reliability analysis of the Work Engagement Scale (UWES) | 242 |
| 4.4 | EXPLORATORY FACTOR ANALYSIS (DIMENSIONALITY ANALYSIS)..... | 246 |
| 4.4.1 | Dimensional Analysis of the Authentic Leadership Inventory (ALI) | 247 |
| 4.4.1.1 | Self-Awareness subscale | 247 |
| 4.4.1.2 | Relational Transparency subscale..... | 248 |
| 4.4.1.3 | Internalized Moral Perspective subscale | 250 |
| 4.4.1.4 | Balanced Processing subscale | 251 |
| 4.4.2 | Dimensional Analysis of the Psychological Capital Questionnaire (PsyCap) | 253 |
| 4.4.2.1 | Self-Efficacy subscale | 253 |
| 4.4.2.2 | Hope subscale | 254 |
| 4.4.2.3 | Resilience subscale..... | 256 |
| 4.4.2.4 | Optimism subscale..... | 257 |
| 4.4.3 | Dimensional analysis of the Psychological Climate Questionnaire | 258 |
| 4.4.3.1 | Supportive Management | 259 |
| 4.4.3.2 | Role Clarity | 260 |
| 4.4.3.3 | Contribution..... | 261 |
| 4.4.3.4 | Recognition | 262 |
| 4.4.3.5 | Self-Expression | 263 |
| 4.4.3.6 | Challenge..... | 265 |
| 4.4.4 | Dimensional Analysis of the Turnover Intention..... | 266 |
| 4.4.4.1 | Turnover Intention..... | 266 |
| 4.4.5 | Dimensional Analysis of the Work Engagement Scale (UWES)..... | 267 |
| 4.4.5.1 | Vigour..... | 268 |

| | | |
|-----------|--|-----|
| 4.4.5.2 | Absorption..... | 269 |
| 4.4.5.3 | Dedication..... | 270 |
| 4.5 | APPRAISING THE FIT OF THE MEASUREMENT MODELS WITH CONFIRMATORY FACTOR ANALYSIS IN LISREL..... | 272 |
| 4.5.1 | Evaluating the fit of the ALI measurement model..... | 273 |
| 4.5.2 | Evaluating the fit of the Psychological Capital measurement model | 276 |
| 4.5.3 | Evaluating the fit of the Psychological Climate measurement model | 279 |
| 4.5.4 | Evaluating the fit of the Turnover Intention measurement model..... | 282 |
| 4.5.5 | Evaluating the fit of the Work Engagement measurement model | 286 |
| 4.5.6 | Evaluating the fit of the Work Engagement measurement model (Short . | 289 |
| 4.5.7 | Evaluating the fit of the Work Engagement measurement model (Short Questionnaire - Final)..... | 292 |
| 4.6 | OVERALL ASSESSMENT OF THE MEASUREMENT MODEL FIT WITH CONFIRMATORY FACTOR ANALYSIS IN LISREL..... | 295 |
| 4.7 | COMPREHENSIVE STRUCTURAL MODEL FIT..... | 298 |
| 4.7.1 | The beta and the gamma matrices..... | 302 |
| 4.8 | CONCLUSION | 308 |
| CHAPTER 5 | | 309 |
| 5 | INTEGRATION OF FINDINGS, DISCUSSION OF RESEARCH RESULTS, CONCLUSIONS AND RECOMMENDATIONS | 309 |
| 5.1 | PREAMBLE | 309 |
| 5.2 | INTRODUCTION..... | 309 |
| 5.3 | SYNOPSIS OF RESEARCH FINDINGS..... | 312 |
| 5.3.1 | Portability of the measuring instruments..... | 312 |
| 5.3.1.1 | Authentic Leadership Inventory..... | 312 |
| 5.3.1.2 | Psychological Capital Questionnaire..... | 313 |
| 5.3.1.3 | Psychological Climate Questionnaire..... | 314 |

| | | |
|---------|---|-----|
| 5.3.1.4 | Turnover Intention Scale..... | 314 |
| 5.3.1.5 | Utrecht Work Engagement Scale | 315 |
| 5.4 | ASSESSMENT OF MODEL HYPOTHESES | 316 |
| 5.5 | PRACTICAL IMPLICATIONS OF THE STUDY | 324 |
| 5.6 | LIMITATIONS OF THE STUDY..... | 326 |
| 5.7 | SUGGESTIONS FOR FUTURE RESEARCH..... | 328 |
| 5.8 | CONCLUSION | 330 |
| | REFERENCES..... | 331 |



UNIVERSITY *of the*
WESTERN CAPE

LIST OF TABLES

| | | |
|------------|---|-----|
| Table 2.1 | Terms and definitions: AL & WE | 56 |
| Table 2.2 | Methodological quality appraisal tool: AL & WE | 60 |
| Table 2.3 | Data extraction tool: AL & WE | 65 |
| Table 2.4 | Dimensions of self-efficacy | 89 |
| Table 2.5 | Methodological quality appraisal tool: PsyCap & WE | 99 |
| Table 2.6 | Data extraction tool: PsyCap & WE | 110 |
| Table 2.7 | Methodological quality appraisal tool: PSYCLIM & WE | 156 |
| Table 2.8 | Data extraction tool: PSYCLIM & WE | 160 |
| Table 2.9 | Turnover intention theories and models | 178 |
| Table 3.1 | Sample summary | 207 |
| Table 3.2 | General guidelines for interpreting reliability coefficients | 224 |
| Table 3.3 | General guidelines for interpreting KMO values | 226 |
| Table 4.1 | The reliability analysis output for the self awareness subscale | 242 |
| Table 4.2 | The reliability analysis output for the relational transparency subscale | 244 |
| Table 4.3 | The reliability analysis output for the internalized moral perspective subscale | 245 |
| Table 4.4 | The reliability analysis output for the balanced processing subscale | 246 |
| Table 4.5 | The reliability analysis output for the self efficacy subscale | 248 |
| Table 4.6 | The reliability analysis output for the hope subscale | 249 |
| Table 4.7 | The reliability analysis output for the resilience subscale | 250 |
| Table 4.8 | The reliability analysis output for the optimism subscale | 252 |
| Table 4.9 | The reliability analysis output for the supportive management subscale | 253 |
| Table 4.10 | The reliability analysis output for the role clarity subscale | 255 |
| Table 4.11 | The reliability analysis output for the contribution subscale | 256 |
| Table 4.12 | The reliability analysis output for the recognition sub scale | 257 |
| Table 4.13 | The reliability analysis output for the self-expression subscale | 258 |
| Table 4.14 | The reliability analysis output for the challenge subscale | 259 |

| | | |
|------------|---|-----|
| Table 4.15 | The reliability analysis output for the turnover intention scale | 260 |
| Table 4.16 | The reliability analysis output for the vigour subscale | 262 |
| Table 4.17 | The reliability analysis output for the absorption subscale | 263 |
| Table 4.18 | The reliability analysis output for the dedication subscale | 264 |
| Table 4.19 | Factor matrix for the self-awareness subscale | 267 |
| Table 4.20 | Factor matrix for the relational transparency subscale | 268 |
| Table 4.21 | Factor matrix for the internalized moral perspective subscale | 270 |
| Table 4.22 | Factor matrix for the balanced processing subscale | 271 |
| Table 4.23 | Factor matrix for the self-efficacy subscale | 273 |
| Table 4.24 | Factor matrix for the hope subscale | 274 |
| Table 4.25 | Factor matrix for the resilience subscale | 275 |
| Table 4.26 | Factor matrix for the optimism subscale | 277 |
| Table 4.27 | Factor matrix for the supportive management subscale | 279 |
| Table 4.28 | Factor matrix for the role clarity subscale | 280 |
| Table 4.29 | Factor matrix for the contribution subscale | 281 |
| Table 4.30 | Factor matrix for the recognition subscale | 282 |
| Table 4.31 | Factor matrix for the self-expression subscale | 283 |
| Table 4.32 | Factor matrix for the self-expression subscale | 284 |
| Table 4.33 | Factor matrix for the supportive management subscale | 286 |
| Table 4.34 | Factor matrix for the vigour subscale | 287 |
| Table 4.35 | Factor matrix for the absorption subscale | 289 |
| Table 4.36 | Factor matrix for the dedication subscale | 290 |
| Table 4.37 | Goodness-of-fit statistics for the authentic leadership inventory measurement model | 293 |
| Table 4.38 | Goodness-of-fit statistics for the psychological capital measurement model | 296 |
| Table 4.39 | Goodness-of-fit statistics for the psychological climate measurement model | 299 |
| Table 4.40 | Goodness-of-fit statistics for the turnover intention measurement model | 302 |
| Table 4.41 | Goodness-of-fit statistics for the turnover intention | 303 |

| | | |
|------------|--|-----|
| | measurement model 2 | |
| Table 4.42 | Goodness-of-fit statistics for the work engagement measurement model | 306 |
| Table 4.43 | Goodness-of-fit statistics for the work engagement measurement model (short questionnaire) | 309 |
| Table 4.44 | Goodness-of-fit statistics for the work engagement measurement model (short questionnaire 2) | 311 |
| Table 4.45 | Goodness-of-fit statistics for the overall measurement model | 315 |
| Table 4.46 | Goodness-of-fit statistics for the comprehensive structural model | 319 |
| Table 4.47 | The Beta and Gamma Matrices | 321 |
| Table 4.48 | Relationships among the variables used in the study | 324 |
| Table 4.49 | ANOVA and Coefficients | 326 |



LIST OF FIGURES

| | | |
|-------------|---|-----|
| Figure 1.1. | Illustration of hypothesized relationships between authentic leadership, psychological capital, psychological climate, intention to quit and work engagement of employees where: IV – Independent Variable, DV – Dependent Variable, MV – Mediating Variable, MoV – Moderating Variable | 27 |
| Figure 2.1. | Flow Chart for screening of studies: authentic leadership and work engagement | 75 |
| Figure 2.2. | Flow Chart for screening of studies: Psychological capital and work engagement | 134 |
| Figure 2.3. | Flow chart for screening of studies: psychological climate and work engagement | 168 |
| Figure 3.1. | The proposed structural model depicting the relationships between authentic leadership, psychological capital, psychological climate, turnover intention and employee engagement | 199 |
| Figure 4.1. | Path diagram for the authentic leadership inventory measurement model | 294 |
| Figure 4.2. | Path diagram for the psychological capital measurement model | 297 |
| Figure 4.3. | Path diagram for the psychological climate measurement model | 300 |
| Figure 4.4. | Path diagram for the turnover intention measurement model | 304 |
| Figure 4.5. | Path diagram for the work engagement measurement model | 307 |
| Figure 4.6. | Path diagram for the Work Engagement measurement model (Short Questionnaire) | 310 |
| Figure 4.7. | Path diagram for the Work Engagement measurement model (Short Questionnaire 2) | 312 |
| Figure 4.8. | Path diagram for the Overall Measurement Model | 316 |
| Figure 4.9. | The fitted structural model | 320 |

GLOSSARY - ACRONYMS AND ABBREVIATIONS

| | |
|----------------|---|
| AL | Authentic Leadership |
| ANOVA | Analysis of variance |
| CFA | Confirmatory Factor Analysis |
| CFI | Comparative Fit Index |
| EFA | Exploratory Factor Analysis |
| GFI | Goodness of Fit Index |
| LMX | Leader- member Exchange Theory |
| NFI | Bentler-Bonett normed fit index |
| NNFI | Bentler-Bonett non-normed fit index |
| OB | Organizational Behaviour |
| PCQ | Psychological Capital Questionnaire |
| PGFI | Parsimony goodness-of-fit index |
| PNFI | Parsimony Normed Fit Index |
| POB | Positive Organizational Behaviour |
| PsyCap | Psychological Capital |
| PsyClim | Psychological Climate |
| RFI | Relative Fit Index |
| RMR | Root mean square residual |
| RMSEA | Root Mean Square Error of Approximation |
| SEM | Structural Equation Modelling |
| TI | Turnover Intention |
| TLI | Tucker-Lewis index |
| UWES | Utrecht Work Engagement Scale |
| WE | Work Engagement |



Statistical notations

| | |
|-----------|-------------------------------|
| α | Cronbach alpha |
| r | Correlation coefficient |
| N | Sample |
| SE | Standard error |
| χ^2 | Chi-square statistic |
| df | Degrees of freedom |
| β | Beta |
| γ | Gamma |
| Σ | Covariance Matrix |
| S | Sample covariance matrix |
| R^2 | Squared multiple correlations |
| ξ | Exogenous latent variables |
| η | Endogenous latent variables |
| λ | Lambda |

CHAPTER 1

INTRODUCTION TO THE STUDY

1.1 PREAMBLE

This study seeks to provide a theoretical model of the relationships between authentic leadership, psychological capital, psychological climate, intention to quit and the work engagement of employees within the banking sector in Nigeria. In particular, this chapter provides a background to the constructs under study as well as a theoretical framework for the study. Aside highlighting the constructs being studied, this chapter emphasizes the aim, objectives, the scope and the motive for embarking on the study.

1.2 INTRODUCTION

Every organization is established with the primary aim of meeting particular objectives: innovation and advancement, satisfying customers, making profit, delivering quality goods and services. These goals are mostly channelled with the intent of demonstrating high performance which is crucial to the continued existence of the organization especially in these rapidly changing global economies. This target, however, cannot be achieved without the aid of employees in the organization. A plethora of previous studies (Christian, Garza, & Slaughter, 2011; Hallberg & Schaufeli, 2006; Kahn, 1990; Kulophas, Ruengtrakul, & Wongwanich, 2015; Macey & Schneider, 2008; Sundaray, 2011) have proven that efficiency, productivity, high performance and stability on the job can be better achieved when employees are dedicated and committed to their work roles. Previous studies have emphasized that engaged employees are more dedicated, produce greater outcomes, and improve customer fidelity than their less engaged colleagues (Bakker, Schaufeli, Leiter, & Taris, 2008; Schaufeli, Bakker, & Salanova, 2006).

Whilst Covey and Gratton, as cited by Bakker, Schaufeli, Leiter, and Taris (2008), agreed that present day organizations are in dire need of engaged employees, Bakker, Demerouti, and Verbeke (2004) posited that engaged employees are ranked high by their colleagues on “in-role and extra-role” performance. This implies that engaged employees are “go-getters” who are inclined to exceed expectations at the workplace. In a meta-analysis of studies in almost 800 business units of 36 companies, Harter et al., as cited by Bakker, Schaufeli, Leiter, and Taris (2008), demonstrated that employee engagement is positively related to performance, customer satisfaction, loyalty, profitability, productivity, turnover, and safety. It was concluded in the study that engagement is “. . . related to meaningful business outcomes at a magnitude that is important to many organizations” (Bakker et al., 2008, p. 151).

It is therefore pertinent that organizations and importantly the management must take into proper account the enhancers of employee engagement so that those enhancers can be fostered in the organizations of this 21st century. The leadership of organizations must note that employee engagement has become a major concern for organizations and apparently the world at large as they seek to enhance productivity, profit and performance. Employees must be considered the “lifelines” of their organizations and must be treated as such if such organizations and even countries must keep afloat in this ever-changing global environment.

Studies by Hallberg and Schaufeli (2006); Maslach and Leiter (2008); Schaufeli, Taris, and Van Rhenen (2008) have attempted to create a demarcation between work engagement and workaholism, burnout, job satisfaction, employee commitment, flow, employee empowerment and organizational citizenship behaviour and some other related constructs to work engagement, with Markos and Sridevi (2010) suggesting that

with the advent of the employee engagement concept – which is much more expansive in scope and more directed towards positive organizational behaviour, although overlapping with some of the above mentioned constructs, it is much easier to conceptualize and determine how employees can be fully engaged and also to bring out greater performance in their job roles.

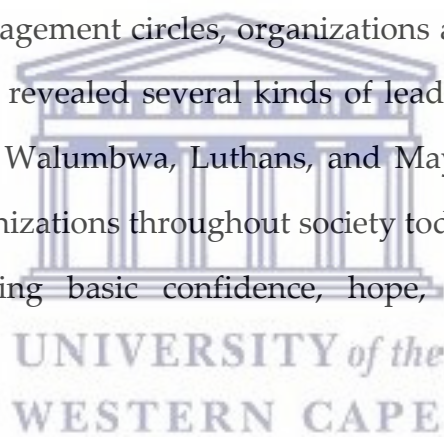
Employee Engagement is not a new concept in managerial circles and in the academia, nevertheless, research has shown that all the antecedents of the construct are still yet to be fully developed or ascertained. Quite a lot might have been written and published about employee engagement, however, in terms of academic research, as stated by Kular, Gatenby, Rees, Soane, and Truss (2008), it could still be said that there is a paucity of information especially with regards to how the management could impact or enhance work engagement. Furthermore, Kular et al. (2008); Markos and Sridevi (2010) noted, that so far, there has been no generally accepted definition of the employee engagement construct as there are several definitions being posited by different authors which has generated several inconsistencies and ambiguities.

Nonetheless, in spite of the divergent opinions in the operational definition of work engagement, there is consensus both for practitioners and in the academics that it is vital that engaged employees be produced and sustained at a workplace as this would result in increased productivity and performance for the organization (Bakker et al., 2008). An assessment on employee engagement research conducted by “Aon Hewitt” discovered that organizational performance figures indicated that companies that had effectively managed and sustained an increased level of employee engagement during the economic recession were now experiencing a dramatic and encouraging effect on

their revenue growth (Hewitt, 2013). This implies that employee engagement is not a random event, it needs to be proactively fostered through leadership.

1.2.1 Leadership is Core

Leadership in the recent past has provoked elements of apprehension and uneasiness for many whilst for others, a source of interest and debate. This is an era where people are desirous and keen to learn about and relate to a leader that would enhance their way of life and provide a definite perspective for them to imitate. Walumbwa, Avolio, and Hartnell (2010) noted that intensified research attention has been placed on positive forms of leadership in the past decade. Outstanding in this 21st century is the effect that leadership has made in management circles, organizations and even in the countries of the world. This century has revealed several kinds of leaders and more so leadership styles. As Avolio, Gardner, Walumbwa, Luthans, and May (2004, p. 802) noted, “the unique stressors facing organizations throughout society today call for a new leadership approach aimed at restoring basic confidence, hope, optimism, resiliency, and meaningfulness”.



The report of Perrin’s Global Workforce Study in identifying fundamental elements that could cause employee dissatisfaction and possibly disengagement indicated that “overwhelming workloads, distant and non-communicative senior leadership (leadership who fail to present a clear picture of future success) and the lack of developmental opportunities” were crucial elements that could not be ignored (Towers Perrin, 2003, p. 1). The report noted that out of the top drivers of employee engagement, “senior management’s interest in employees well-being” came top on the list confirming what Lipman (2013) suggests that leaders hold the key to work engagement of employees.

In the past, several leadership styles have been posited: *Transformational* – a visionary leadership approach which enhances change and progress through challenging, motivating, inspiring and transforming the followers' thinking pattern (Schuh, Zhang, & Tian, 2013; Stone, Russell, & Patterson, 2004); *Servant* – servant-leaders are more concerned about the needs of others than their own and therefore assists followers to make progress, achieve greater heights and advance as much as possible (Manala, 2014; Stone et al., 2004); *Charismatic* – leadership style that makes a profound effect on followers because of extraordinary leadership qualities displayed by the leader such that followers willingly submit to such authority (Nikoloski, 2015; Walker, 2009); *Paternalistic* – a father-like approach of leadership in which the leader takes care of followers like a parent having concern for their wellbeing (Chen, Eberly, Chiang, Farh, & Cheng, 2014); *Democratic* – leadership style that is executed in such a way that the followers are empowered to be a part of the decision making process through their participation and consensus (Mohammed et al., 2014; Solaja & Ogunola, 2016); *Transactional* - a leadership approach that is focused on the use of rewards and punishments to enforce compliance (Batista-Taran, Shuck, Gutierrez, & Baralt, 2009); *Authoritarian* – a leadership style that keeps a strict and firm watch over subordinates by enforcing stern rules and policies (Schuh et al., 2013); *Lassie-Faire* – a leadership style that is characterized by an absolute delegation of tasks, rights and powers to followers by the leader without the provision of direction or guidance to the follower (Mohammed et al., 2014; Solaja & Ogunola, 2016) and *Authentic* leadership. George as cited by Avolio et al., (2004) stated that in recent times, authentic leadership in particular has received widespread attention amongst both leadership practitioners and researchers.

Leaders have a cumulative change effect on their followers; hence, leaders in an organization can be termed as core drivers of employee engagement. It then becomes imperative to seek to understand what authentic leadership as a construct has to offer this century. Authentic leaders know what they stand for, what their value systems are and they candidly and effectively communicate these moral values to their followers. Avolio et al., (2004) conceded that the impact that authentic leaders make on their followers far exceeds “bottom-line success.” It is therefore not surprising that there is an increased interest from both practitioners and scholars in this construct. This leadership approach has gradually been embraced as a contemporary leadership style that is more conscious about people and ethics. Authentic leadership is a leadership approach that employs truthful, honest and open relationships with followers or subordinates as a means to improving individual and organizational performance. The 2003 Talent Report affirmed that “nothing destroys trust and engagement more over time than inconsistency—or worse, outright contradictions—between words and actions” (Towers Perrin, 2003, p. 11). Authentic leaders therefore portray their true personalities and engage in self-disclosure practices which subsequently cultivate positive emotions such as trust and engagement from followers (Guenther, Schreurs, van Emmerik, & Sun, 2017; Li, Yu, Yang, Qi, & Fu, 2014) .

1.2.2 Other variables in this study

At the turn of the century, a campaign towards the study of how individuals in organizations could be developed to respond effectively to the negative aspects of life in organizations and life in general materialized. Instead of the excessive focus on negative experiences of employees in organizations such as, conflict, role overload, stress, and burnout, attention was shifted to constructs like confidence, optimism, hope, resilience, trust, and work engagement (Luthans, 2002a; 2002b). Positive Organizational

Behaviour (POB) was therefore introduced. POB focuses on people's strengths and their psychological capital (PsyCap) and how these strengths can be developed and sustained. Luthans, (2002a, p. 59) defined POB as "the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace."

It is also essential that the psychological perceptions of individuals in the workplace be explored so as to understand and identify its effect on employees and to introduce measures that could assist in producing higher levels of job performance. Schneider and Snyder as cited by Biswas (2012), propose that employees explain their organizational environment as they individually perceive it. It is believed that "such perceptions of the work environment by an individual on a day-to-day basis are known as psychological climate" (Biswas, 2012, p. 2). Literature on Psychological Climate highlights the relationship between Psychological Climate perceptions and its relationship to a variety of individual level outcomes in the organization such as behaviour (i.e. job satisfaction, organizational citizenship behaviour, job involvement, motivation, psychological well-being and employee performance). It is therefore hypothesized that there will be a positive relationship between authentic leadership and psychological climate (Meyers & van Woerkom, 2017; Norton, Zacher, Parker, & Ashkanasy, 2017; Schrock, Hughes, Fu, Richards, & Jones, 2016). This positive association has a bearing on employees' turnover intentions.

Tett and Meyer (1993, p. 262) defined Intention to Quit or turnover intention as: "... the conscious and deliberate willfulness to leave the organization." Intentions can be seen as desires or a person's plan. It is a state of having a purpose in mind. Alexander,

Lichtenstein, Oh, and Ullman (1998), in a study conducted on turnover rates among psychiatric nurses, observed that intentions to leave an organization were cogent factors to be considered when considering turnover. In 2013, Bothma and Roodt, also established an indirect correlation between turnover intention and excessive job demands.

1.3 BACKGROUND

Employee engagement and its related advantages have been seen to be of paramount significance to organizations and leadership strata all around the world. Findings from 2013 and 2014 Trends in Global Employee Engagement reported that engagement levels rose slightly from 58% to 60% and then to 61% from 2011, 2012 and 2013 respectively (Hewitt, 2013; 2014). However, Gallup, Inc., an American research-based, global performance management consulting company, asserted according to its 142-country study on the "State of the Global Workplace" in October 2013, that only 13% of employees worldwide were engaged at work (Gallup, 2013). This percentage when calculated in terms of the 180 million employees in the countries studied, would translate to only about one in eight workers. Other statistics confirmed declining worldwide spiral engagement levels with only about 30% employees engaged at work (Hoole & Hotz, 2016). This meant that only these minimal percentages of workers were psychologically committed to their jobs and would likely make a positive contribution to their organization. In essence, the bulk of employees worldwide is not engaged and lacks the needed drive towards the accomplishment of organizational goals or outcomes. Gallup Inc. emphasized that about 24% employees are actively disengaged and this unengaged state indicates their unhappy, nonchalance and unproductive state at work.

Engagement levels among employees vary across different global regions and among countries. In 2013, Gallup Inc. found out that Northern America had the highest proportion of engaged workers, at 29%, followed by Australia and New Zealand, at 24%. South Africa had an average of 9% engaged workers, 46% unengaged workers and 45% actively disengaged employees whilst Nigeria had an average of 12% engaged workers, 65% unengaged workers and 23% actively disengaged employees. Gallup's findings indicate that workers that are unengaged or disengaged are more likely to pilfer the organizations resources, negatively influence other coworkers and be involved in absenteeism. Lipman (2013) discovered that women were more engaged than men with 33% engaged, 50% not engaged and 17% actively disengaged whilst 28% of men were engaged, 53% not engaged and 19% actively disengaged. Furthermore, Hoole and Hotz (2016) indicated that the engagement level of South Africa had dropped drastically with 80% of workers being detached from their work and 43% of employees with turnover intents. The authors added that based on statistical information, South Africans have been touted as the most disengaged workers in the world. These disturbing statistical information emphasize the need for more research to be conducted on the enhancers of engagement so that sustainable solutions can be proffered to the "monster" of employee disengagement and possibly turnover. More extensive research is therefore required especially in different contexts so that better engagement approaches can be facilitated (Hoole & Bonnema, 2015; Rothmann, 2008; Van der Colff & Rothmann, 2009).

1.4 RESEARCH CONSTRUCT

1.4.1 Employee Engagement

Employee engagement is one of the positive states that have received increased attention in recent times and it has been developed as an essential concept in industrial

and organizational psychology to portray the “mental state underlying high degrees of work motivation” (Bledow, Schmitt, Frese, & Kühnel, 2011, p. 1246). Schaufeli et al., (2002, p. 74) conceptualized work engagement as “a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption.”

Maslach, Schaufeli, and Leiter (2001) described work engagement in a metaphoric sense placing burnout at the end of a continuum and work engagement at the opposite end of the continuum. Maslach et al. (2001) were of the opinion that every individual can be rated on a scale of either experiencing burnout or being engaged. The authors proposed that when an individual is engaged at work, that is enthusiastic, passionate, deep rooted engrossment with work roles, then the employee moves gradually from the other end of the continuum which is burnout – prolonged fatigue, diminished or total lack of interest in work. Burnout is a negative state which subsequently results in absenteeism, lower productivity, health related problems or intention to quit. However, in a divergent opinion, Schaufeli, Salanova, Gonzales-Roma, and Bakker (2002) conceptualized work engagement as a stand-alone positive construct which can be measured independent of burnout.

Kahn, who first authored work engagement into the limelight referred to the concept as “employees’ investment of physical, cognitive, and emotional energy and a full deployment of themselves into their work roles or tasks” (Serrano & Reichard, 2011, p. 176), whilst disengagement is the deliberate emotional, cognitive and physical withdrawal and detachment of employees from their work duties (Kahn, 1990). Industry experts from two research organizations gave their definitions of engagement as “the state of emotional and intellectual involvement that motivates employees to do their best in their work” (Hewitt, 2012, p. 5), and “the willingness and ability of the

employee to contribute to the success of the organization” or “the extent to which employees put their discretionary effort into their work in the form of extra time, brainpower and energy”(Towers Perrin, 2003).

1.4.1.1 Vigour

Vigour depicts the strength, vitality and “high levels of energy and willingness to invest effort in work as well as mental resilience or persistence on work tasks despite challenges” (Schaufeli et al., 2002, p. 74). It is the motivated state of mind and tenacity that is displayed by employees in the face of difficulties.

1.4.1.2 Dedication

Schaufeli et al., (2002) stated that Dedication, refers to the commitment, devotion, allegiance and “a sense of significance, enthusiasm, inspiration, pride, and challenge” that is portrayed by an employee (p. 74). It is a sense of being strongly involved in one’s work with a sense of self-worth, passion and creativity.

1.4.1.3 Absorption

Absorption, which is the third crucial ingredient of work engagement as indicated by Schaufeli et al. (2002, p. 74), is typified by a preoccupation, captivation and “full concentration and engrossment in a work task”. This refers to deep attentiveness and involvement with one’s work such that the time passes quickly without knowing it.

Many authors have proven that engagement denotes a determined, influential, emotional and rational state of mind that is not particularly focused on any particular object, event, individual, or behaviour but more of an intrinsic motivational state demonstrated by an employee. As a deviation from those who suffer from burnout and

exhaustion, engaged employees are so engrossed and connected with their work activities such that they see themselves as capable of managing their jobs demands. Lipman (2013) suggested that work engagement should not be mixed up with staff being happy or eagerly sitting through an 8am to 5pm working day, but an engaged worker will take the initiative and make positive, productive impact on the organization.

1.4.2 Authentic Leadership

The expression of an authentic self is a fundamental requirement in leadership (Goffee & Jones, 2005). It is a challenge that every authentic leader is faced with. There is an anticipated authenticity that every follower demands of a leader which is to be real, trustworthy, sincere, dependable, genuine, just and honest. Avolio et al. (2004, p. 802) citing McCain and Salter referred to the importance of being authentic as learning to love honesty and justice, “not just for their effect on personal circumstances”, but for their impact on humanity and on the world at large. These characteristics when demonstrated by the leader motivate the followers to adhere, obey the leader’s rules and initiate more commitment towards the organization. Goffee and Jones (2005) furthermore propose that only subordinates or followers can attest that a leader is authentic. It thus implies that a leader cannot classify himself as authentic but can only be observed as authentic by other people. Authentic leaders’ marshal unfeigned lives and their followers are motivated to do the same. Authentic leaders actively pass to their followers, a desire for fulfillment, a drive for success and psychological capacities needed for high level performance and commitment. Citing Gardner and Schermerhorn, Avolio et al. (2004) noted that the duty of an authentic leader is to cultivate optimism in followers. Avolio (1999) clarified that Authentic leaders act in accordance with their intrinsic personal values and convictions, to build credibility and

win the respect and trust of followers by encouraging diverse viewpoints and building networks of collaborative relationships with followers, and thereby lead in a manner that followers recognize as authentic. These actions exhibited by an authentic leader will subsequently propel the employees or the followers to act in a similar authentic manner, which consequently will become a basis to create a stable organizational culture.

Walumbwa, Avolio, Gardner, Wernsing, and Peterson in defining authentic leadership cited Luthans and Avolio as “a process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviours on the part of the leaders and associates, fostering positive self-development” (2008, p. 92). Authentic leaders are “those individuals who are deeply aware of how they think and behave and are perceived by others as being aware of their own and others’ values/moral perspective, knowledge, and strengths; aware of the context in which they operate; and who are confident, hopeful, optimistic, resilient, and high on moral character” (Avolio et al. 2004, p. 802). Kark and Shamir (2005) proposed that authentic leaders have what it takes to boost and motivate their followers such that they can be much more dedicated, enthusiastic, engrossed and engaged in their work roles (Avolio et al. 2004).

Northhouse (2015) proposed three models of authentic leadership based on the previous work of Avolio and Gardner, (2005); Eagly, (2005); Shamir and Eilam, (2005); Walumbwa, Avolio, Gardner, Wernsing, and Peterson, (2008). These models are the Intrapersonal, Developmental and Interpersonal models. The Intrapersonal authentic leadership model is rooted on self-concept and how self-concept relates to the leader’s actions (Shamir & Eilam, 2005). These authors stated that authentic leadership is

characterized by Genuine leadership, Conviction, Originality and action based on Values. Secondly, Avolio and Gardner, (2005); Walumbwa et al., (2008) considered authentic leadership as a developmental style of leadership. They proposed that leadership can be cultivated, nurtured and developed over a lifetime and can be triggered by major life events. These authors support their argument with the developmental model of four components namely: Self-awareness, Internalized moral perspective, Balanced processing and Relational transparency. Thirdly, the Interpersonal definition of authentic leadership by Eagly (2005) noted that leadership is created by a joint effort between the leader and the follower. Leaders create the change they desire and followers realize intended outcomes when they identify with each other's values.

Furthermore, George (2003); George, Sims, and McLean (2007) and Terry (1993) introduced two practical approaches to authentic leadership. Terry's approach was an action/practice-centered model which suggests that leaders should endeavour to do what is right. It lays emphasis on the action of the leader or leadership in a particular situation. The author developed an Authentic Action Wheel to assist leaders with their problems by detecting the problem on the diagnostic wheel and then tactically selecting a suitable response to the problem. On the other hand, George (2003); George and Sims (2007), developed a leader characteristic model which suggests that leaders have genuine desire to serve others. The authors' approach of authentic leadership is characterized with: understanding of purpose, strong values, trusting relationships, self-discipline and actions taken from the heart.

However, for the purpose of this study, authentic leadership is conceptualized on the developmental pattern which is based on the four-component model of authentic

leadership modified from the works of Gardner, Avolio, Luthans, May, and Walumbwa, (2005); Ilies, Morgeson, and Nahrgang, (2005); Luthans and Avolio, (2003). Authentic leadership is defined as “a pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development (Walumbwa et al., 2008, p. 94).

1.4.2.1 Self-Awareness

Self-awareness is a never ending process of personal examination and re-evaluation by leaders of their own competences, abilities, strengths, weaknesses, limitations, beliefs and moral principles. They are fully aware of the impact they make on people, acknowledge those around them and fully understand how people perceive them.

1.4.2.2 Relational Transparency

Relational transparency refers to the openness exhibited by the leader towards the followers. The leader properly balances his or her own thoughts, beliefs and principles with the right emotions. The leader promotes a level of honesty and sincerity with others which encourages them to willingly reciprocate such positive attributes (Gardner et al., 2005). This kind of relationship fosters trust between the followers and the leadership.

1.4.2.3 Balanced Processing

The leader solicits sufficient opinions, ideas and suggestions from the followers and objectively analyzes them before reaching a conclusion. Such leaders often solicit viewpoints that oppose their deeply held standpoint (Gardner et al., 2005).

1.4.2.4 *Internalized Moral perspective*

This is an “internalized and integrated form of self-regulation” (Ryan & Deci, 2003). It is the degree to which the leader sets a high standard for moral and ethical conduct. This form of self-regulation is guided by positive ethical foundation that is adhered to by the leader despite conflicting societal pressures or organizational norms. This is expressed in decision making and behaviour that is consistent with these internalized values (Gardner et al., 2005).

1.4.3 Psychological Capital

Gleaned from positive psychology and positive organizational behavioural study (Seligman, 1999), positive capacities such as psychological capital (PsyCap) were introduced. Luthans, Luthans, and Luthans, (2004, p. 46) asserts that psychological capital stretches beyond human capital “what you are”, social capital “who you know”, financial capital “what you have” and also consists of “who you are”. Psychological Capital therefore can be regarded as “who you are” and “what you can become” in terms of positive development (Luthans, Avey, Avolio, Norman, & Combs, 2006).

According to Bakker and Schaufeli (2008), positive organizational behaviour research focuses on high performance in organizations and explores the conditions under which employees excel. Research indicates that organizations experience undesirable consequences as a result of low levels of work engagement. Such consequences include low productivity, and high levels of employee absenteeism and turnover (Robertson & Cooper, 2010). A meta-analysis conducted by Avey, Luthans, and Jensen (2009) shows that PsyCap is positively related to pleasant employee attitudes and vice-versa. A positive relationship between PsyCap and Work Engagement has also been established

(Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). It is hypothesized that a positive relationship between PsyCap and Work Engagement will be found in this study.

PsyCap has been defined as “an individual’s positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success” (Luthans, Youssef, & Avolio, 2007, p. 3). Synder posits that positive psychology literature have observed that the four constructs that depict psychological capital: hope, resiliency, optimism, and efficacy though used in normal day-to-day activities, and sometimes used interchangeably, have been distinguished and distinctly defined (cited by Avolio et al., 2004). Studies have shown that PsyCap is related to high performance in the workplace, commitment, reduction in employee absenteeism, less employee skepticism, less intentions to quit as well as increased satisfaction at work, and organizational citizenship behaviours. Research has also found PsyCap can be improved by a supportive work climate (Avolio et al., 2004).

1.4.3.1 Self-Efficacy

In a meta-analysis consisting of 114 studies, a strong positive relationship was found between self-efficacy and job-related achievements (Stajkovic & Luthans, 1998b). Employees who possess high levels of confidence will achieve greater tasks and are better motivated to work. The authors, Stajkovic and Luthans (1998a, p. 66) define self-efficacy as the “individual’s conviction or confidence about his or her abilities to mobilize the motivation, cognitive resources, and courses of action needed to

successfully execute a specific task within a given context.” Individuals with high levels of self-efficacy are “go-getters”, more daring, highly energetic & enthusiastic, do all it takes to accomplish their goals and endure at the face of difficulties or setbacks. In other words, those people “have high confidence in their ability to master tasks, achieve success” (Luthans, Avolio, Avey, & Norman, 2007).

1.4.3.2 Hope

Avolio et al., (2004, p. 808) citing Snyder, defines Hope as “a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-oriented energy, will-power and determination) and (b) pathways (planning to meet goals and aspirations).” The “agency” can be interpreted as the motivation or goal-directed energy to achieve a given or specific task. The pathway component is viewed as the techniques or processes initiated to accomplish a task or goal. In clinical and positive psychology, hope has been clearly connected to academic and athletic success (Snyder), and also in the workplace (Luthans, Norman, Avolio, & Avey, 2008). It has been proposed that authentic leadership will contribute significantly to the nurturing of hope in followers. Luthans and Avolio (2003, p. 253) stated that the “force multiplier throughout history has often been attributed to the leader’s ability to generate hope.”

1.4.3.3 Optimism

Optimism ascribes positive events to personal, permanent and general situations and interprets negative events in terms of external, temporary and situation-specific factors whilst Pessimism is described as a style in which positive events are interpreted in terms of external, temporary and situation-specific attributes and negative events in terms of personal, permanent, and general situations (Seligman, 1999). The author explains that optimism makes an internal, relatively stable, and global attribution

regarding positive events such as goal achievement, and an external, relatively unstable, and specific cause for negative events like a failed attempt at reaching a goal (Seligman, 1999). Optimists therefore explain bad occurrences as being temporary and good occurrences as being permanent while pessimists deduce bad experiences as being permanent and good experiences as being short-lived. Seligman (1999) discovered that optimism was significantly and positively associated to the performance of insurance sales agents whilst Luthans, Avolio, Walumbwa, and Li (2005) stated that optimism was significantly related to rated performance among Chinese factory workers. Luthans and Youssef (2007) added that employees' optimism was associated with their achievements and satisfaction.

1.4.3.4 Resilience

Resilience theory has been significantly drawn from research conducted on adolescent children who succeeded despite great hardship and misfortune (Masten & Reed, 2002; Masten, 2001). Resilience is defined as the "capacity to rebound or bounce back from adversity, conflict, failure, or even positive events, towards progress and increased responsibility" (Luthans, 2002, p. 702). This energy and ability to spring back from negative or even dramatic positive experiences is crucial in today's chaotic organizational environment (Luthans et al., 2004). Workplace politics, leadership styles, societal demands, job demands, stress, to mention a few can make a major impact on individuals at the workplace; resilience is therefore needed by employees to keep afloat. Although, it could be argued that resilience may not be an attribute that is easy to acquire, however, Masten (2001, p. 235) says that there is evidence that resilience can come "from the everyday magic of ordinary, normative human resources" and "has profound implications for promoting competence and human capital in individuals and society." Coutu (2002) proposes that resilient people have similar attributes which are:

unwavering acceptance of reality, faith in having a positive outcome from life and the capacity to adapt to whatever change life brings to them.

1.4.4 Psychological Climate

Brown and Leigh (1996) citing James et al., referred to Psychological climate as the manner in which members of an organization comprehend and decipher the policies, practices and procedures in the organizational environments in which they work. The authors noted that psychological climate can be viewed as “an individual trait” and not “an organizational trait.” This is unlike Organizational climate also known as “corporate climate” which is the consensual perception of employees towards the set of practices and procedures of the work environment. This group perception is assumed to be a key influential factor of employee behaviour.

Psychological climate has been seen to be substantially connected to performance in businesses. Parker et al., as cited by Langkamer and Ervin (2008) has established that there is an association between actual organizational events, employee attitudes and behaviours and psychological climate perceptions. James, Hater, Gent, and Bruni, (1978, p. 3) referred to psychological climate as “a perceptually based, psychologically processed description of the situation, in which the individual filters, interprets, and structures perceptions of the situations” or environment.” Thus, psychological climate has been conceptualized as an individual’s work place experience and how the individual process information, view situations and relates to the work environment. The way an employee therefore observes and understands the organization and working conditions of such organization go a long way in predicting the behaviour and attitudes of the employee. Brown and Leigh (1996), using the work of Kahn (1990) as a core of employee engagement and disengagement produced six dimensions of

psychological climate. They propose these factors are pointers as to how psychologically secure and significant the employee sees the organizational environment he is in to be.

1.4.4.1 Supportive Management

Supportive management gives room for subordinates to put in their best without fear of reprisals if they fail. It also ensures that they have autonomy over their own work and the approaches used in accomplishing it. It therefore allows workers to try out new techniques and procedures on the work problems they face and this attitude allows for freedom and creativity (Brown & Leigh, 1996; Saks, 2006).

1.4.4.2 Role Clarity

Clarity of organizational roles has been acknowledged as an impetus for employee engagement (Chaudhary, Rangnekar, & Barua, 2012; Mendes & Stander, 2011). When job expectations and work situations are ambiguous, unpredictable and conflicting, the psychological and mental safety of employees are undermined and engagement levels are likely to be low. However, “clear expectations and consistent, predictable work norms create a psychologically safe environment and also an increased job involvement” (Brown & Leigh, 1996, p. 360).

1.4.4.3 Contribution

When an employee perceives that his or her work or input at the workplace significantly impacts productivity or organizational outcomes, the employee is likely to contribute to the work meaningfulness and boost employees' identification with their work roles (Brown & Leigh, 1996; Kahn, 1990; Mendes & Stander, 2011).

1.4.4.4 Recognition

When employees observe that their efforts and service in an organization is appreciated and recognized, they become more committed to their work roles. Employees who feel that their efforts are appropriately acknowledged will identify more with their jobs and be more engaged (Brown & Leigh, 1996; Kahn, 1990; Maslach et al., 2001).

1.4.4.5 Self-expression

Employees will be uncommunicative, passive and withdraw themselves from their work roles if they anticipate that they will incur penalties and sanctions for expressing their “individuality in their work roles” (Brown & Leigh, 1996; Olivier & Rothmann, 2007). There is every likelihood that employees would prefer to carry out their duties on a routinal basis if workers feel psychologically unsafe in their work roles, but if otherwise, they would likely infuse their personalities, creative ideas and self-concepts into their work roles. “Such personalized role performances are likely to indicate a high degree of perceived psychological safety in the work role and organizational environment” (Brown & Leigh, 1996, p. 360).

1.4.4.6 Challenge

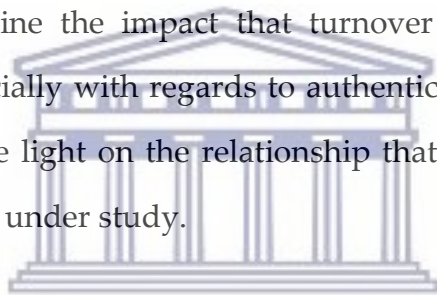
Kahn proposed that personal growth in the work role will likely occur when work is challenging, requiring the use of creativity and a variety of skills. The author believed that challenging work encourages workers to “invest greater amounts of their physical, cognitive, and emotional resources in their work and is likely to result in greater perceived meaningfulness of the work experience”(Brown & Leigh, 1996, p. 361). Employees are likely to more motivated, absorbed and dedicated to their duties if they perceive their duties at work is challenging (Coetzer & Rothmann, 2007; Ryan & Deci, 2000).

1.4.5 Intention to Quit

Employee turnover is of utmost importance to managers. The financial and physical issues generated when employees quit their jobs are enormous and should not be underestimated. Siong, Mellor, Moore, and Firth (2006) refer to very specific challenges that arise as a result of employees leaving an organization, some of which are an absence of employee stability in the organization, excessive high costs associated with the advertising, recruitment and training of newly employed staff as well as a negative impact on the overall productivity of an organization. Consequently, concerted efforts have been made by researchers to identify the inherent factors associated with turnover so as to equip and assist leaders and managers to curb its influx (Firth, Mellor, Moore, & Loquet, 2004).

Intention to quit has been defined by Boshoff, van Wyk, Hoole, and Owen, (2002, p. 14), as “the strength of an individual’s view that he or she does not want to stay with his or her current employer” whilst Tett and Meyer, (1993, p. 262) define it as “... the conscious and deliberate willfulness to leave the organization”. Quitting intent that is contemplated by an individual is crucial because although not yet executed, it has a strong bearing on the attitudes and actions of the individual at the workplace. Several models have been proposed in recent years; one such model was proposed by Firth et al., (2004) which reported on a research work conducted on the sales personnel of a retail clothing of a large department store. They discovered that dissatisfaction at work, lack of commitment and stress especially job related stressors such as work overload and job ambiguity are triggering factors of psychological states that largely influence an employee’s intention to quit an organization (Firth et al., 2004). According to Bothma and Roodt (2012), several authors have established an indirect correlation between turnover intentions as a consequence of excessive job demands. Sager's study of

salespeople clarified the rationale behind studying quitting intentions as against the actual quitting behaviour in the workplace (Siong et al., 2006). There was a clear difference between individuals that left the organization and those that stayed as a result of their intention to quit. Ajzen and Fishbein, Igarria and Greenhaus explained that intentions are the “most immediate determinants of actual behaviour” (Firth et. al., 2004, p. 171). Furthermore, Alexander et al. found out in a study on turnover rate among psychiatric nurses that intentions predicted the rate of turnover significantly (Firth et. al., 2004). However, Griffeth, Hom, and Gaertner (2000) have argued that intentions to quit may not absolutely clarify the huge disparity in quitting behaviour. This study as a deviation from the norm, that is studying the predictors of turnover intention, strives to determine the impact that turnover intentions would have on employee engagement especially with regards to authentic leadership. This dimension may assist in shedding more light on the relationship that exists between intention to quit and the other constructs under study.



1.5 RATIONALE FOR THE RESEARCH

Studies have reportedly shown that leadership is core to employee engagement (Avolio et al., 2004; Engelbrecht, Heine, & Mahembe, 2017; Rego, Sousa, Marques, & Cunha, 2012; Walumbwa et al., 2008). These findings are in line with Gallup's “State of the American Workplace” report which highlighted findings from its study of the American workplace from 2010 through 2012. The study stated that the biggest single decision that will be made in any organization is who is named the manager, asserting that when a wrong person is appointed as manager, almost nothing would be able to fix the grave decision not even a good pay. Branham (2005) identified seven reasons why most employees quit their jobs, two of which are: an attitude of being undervalued or

unappreciated by bosses at work and a loss of confidence in the management. These two identified points boil down to leadership.

Despite the numerous research that has been conducted on authentic leadership and engagement (Muchiri, 2011), few omissions still subsists especially regarding mediating and moderating variables. Research has not established the mediating and moderating variables under study with regards to work engagement. Previous studies have considered intention to quit as an outcome of work-related negative experiences, but this study seeks to deviate from this stance by studying intention to quit as a moderating variable between authentic leadership and employee engagement. Additionally, this study will through systematic reviews - critical, rigorous and transparent appraisal of previous research, validate or disprove the findings of previous research conducted on the above named constructs.

1.6 STATEMENT OF THE RESEARCH PROBLEM

The research problem is a well-defined, detailed, fundamental statement that the researcher would like to investigate. Sekaran (2001) defined a research problem or statement as a statement that the researcher would like to proffer an answer to. The research problem also charts a course of direction for the research study.

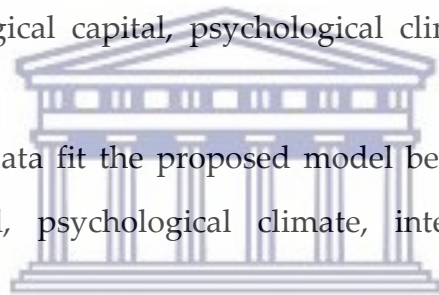
As studies have shown and as previously discussed, since disengaged workers are rife and on the increase in many organizations globally, it is essential that measures are put in place to curb its massive proliferation and consequently high staff turnover. If this situation persists, then organizational lack of performance and ultimate collapse is inevitable. This plague will eventually impact the society as a whole.

Hence, this study explores authentic leadership, psychological capital, psychological climate and intention to quit and its impact on enhancing the culture of employee engagement which, in turn, would increase performance outcomes in organizations. This study has also endeavoured to validate the Turnover Intention scale.

1.7 RESEARCH QUESTIONS

In line with the statement of the research problem for the proposed study, the following overarching research questions will be explored.

1. What is the nature of the relationships of the variables identified in the model?
2. What are the previous research findings on the relationships between authentic leadership, psychological capital, psychological climate, intention to quit and work engagement?
3. How well does the data fit the proposed model between authentic leadership, psychological capital, psychological climate, intention to quit and work engagement?



UNIVERSITY of the
WESTERN CAPE

1.8 AIM OF THE PRESENT STUDY

The aim of the study is to explore, develop and test an integrated model of relationships that exist between authentic leadership, psychological capital, psychological climate, intention to quit and work engagement. On a general term, this study aims to ascertain the strength of the proposed integrated model on an African sample and to establish through a systematic review, the reliability and credibility of previous work that had been carried out in this regard.

1.9 RESEARCH OBJECTIVES

In line with the aim of the study, the following research objectives will be explored.

1. To systematically review previous research examining the relationship between authentic leadership, psychological capital, psychological climate and work engagement of employees.
 - a. Systematically review previous studies examining the relationship between authentic leadership and work engagement of employees.
 - b. Systematically review studies that examined the relationship between psychological capital and employee engagement.
 - c. Systematically review the relationship between psychological climate and work engagement of employees based on previous studies.
2. To undertake an empirical investigation to test the proposed theoretical model of the relationships among the variables under investigation through the administration of a composite questionnaire.
 - a. To determine whether PsyCap mediates the relationship between authentic leadership and work engagement.
 - b. To determine whether psychological climate mediates the relationship between authentic leadership and work engagement.
 - c. To ascertain the relationship between intention to quit and work engagement.
 - d. To ascertain the moderating effect of intention to quit on the relationship between authentic leadership and work engagement.

1.10 RESEARCH HYPOTHESES

From the bivariate and multivariate relationships found to exist among the constructs under study based on previous literature, the following research hypotheses have been specified for empirical testing. These research hypotheses are:

- **Hypothesis 1:** Authentic leadership behaviours positively affects work engagement..

- **Hypothesis 2:** Psychological capital positively affects work engagement.
- **Hypothesis 3:** Psychological climate positively affects work engagement.
- **Hypothesis 4:** Psychological Capital will mediate the relationship between authentic leadership and work engagement.
- **Hypothesis 5:** Psychological climate will mediate the relationship between authentic leadership and work engagement.
- **Hypothesis 6:** Intention to quit is negatively related to work engagement.
- **Hypothesis 7:** Intention to quit will negatively moderate the relationship between authentic leadership and work engagement.

1.11 THEORETICAL FRAMEWORK

The following theoretical conceptual framework is proposed; the main aim of which is to establish a relationship between the variables being investigated:

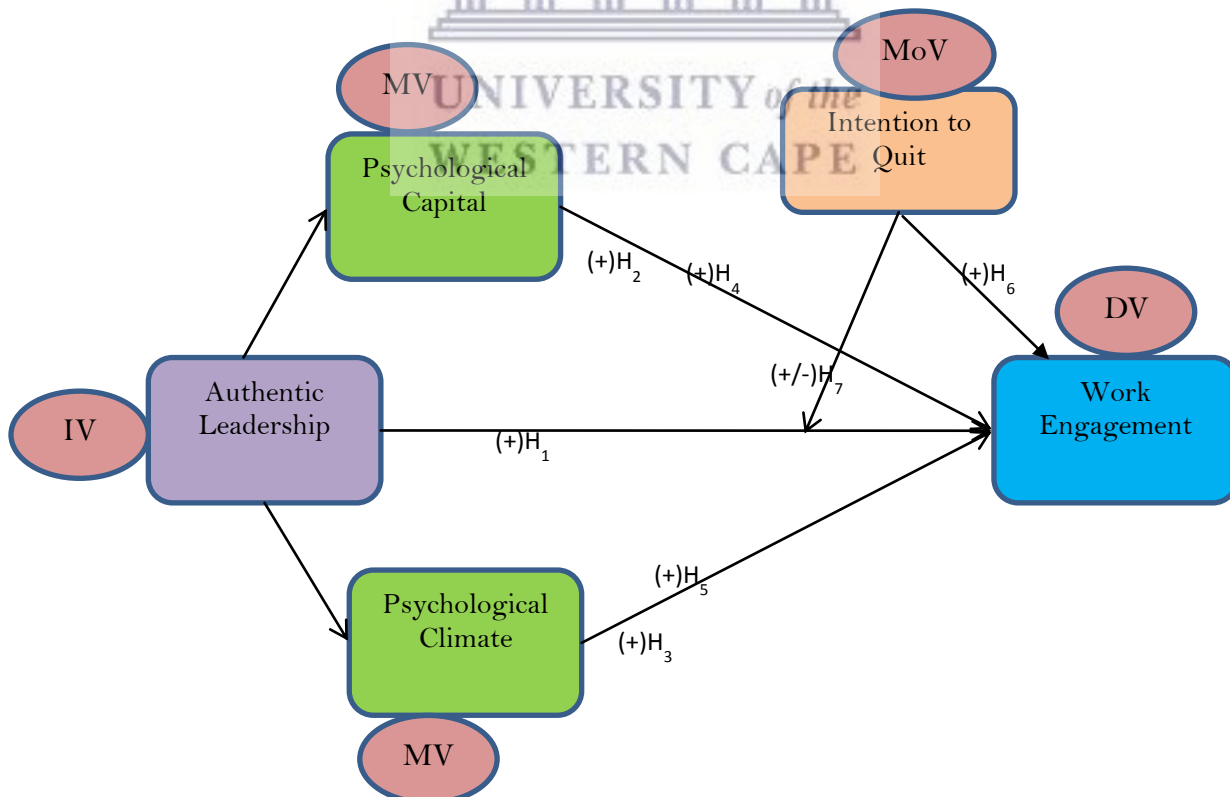


Figure 1.1: Illustration of hypothesized relationships between Authentic Leadership, Psychological Capital, Psychological Climate, Intention to Quit and Work Engagement of employees where: IV – independent variable, DV – dependent variable, MV – mediating variable, MoV – moderating variable.

1.12 DEFINITION OF CONCEPTS

Positive Organizational Behaviour (POB)

Luthans (2002, p. 59) defines POB as “the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace.”

Authentic Leadership

“A pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development” (Walumbwa et al., 2008, p. 94).

Psychological Capital (PsyCap)

Positive PsyCap has been described as the positively, developmental oriented nature of a person that is typified by self-efficacy, hope, optimism and resilience (Luthans & Youssef, 2004).

Psychological Climate

Psychological climate can be regarded as an “individual’s cognitive appraisal of his organizational environment that assesses the” importance and value of the work situations (Langkamer & Ervin, 2008, p. 221).

Intention to quit/Turnover Intention

Intention to quit according to Mobley is part of the process in the “psychological withdrawal” of a follower or employee from the workplace Nyamubarwa (2013), whilst Tett and Meyer (1993) stated that it is the conscious and deliberate desire to leave an organization.

Work Engagement/Employee Engagement

Schaufeli et al., (2002) define work engagement as a positive, fulfilling, work-related state of mind that is typified by vigour, dedication and absorption.

Structural equation Modeling

SEM is a collection of statistical methods designed to test conceptual or theoretical model. It is an established “statistical technique that establishes measurement models and structural models to address complicated behavioural relationships” (Nusair & Hua, 2010, p.314).

Systematic review

A systematic review is an organized method of locating, assembling and evaluating a body of literature on a particular issue using a set of specific criteria. Petticrew and Roberts (2008) state that a systematic review is “a review that strives to

comprehensively identify, appraise, and synthesize all the relevant studies on a given topic.”

1.13 DELIMITATION

The constructs explored in this study are authentic leadership, psychological capital, psychological climate, intention to quit and work engagement. The first phase of the research will be systematic reviews which will be limited to three studies namely, (i) the relationship between authentic leadership and work engagement, (ii) the relationship between psychological capital and work engagement, and (iii) the relationship between psychological climate and work engagement whilst the data collection will be limited to the banking industry in Nigeria.

1.14 POTENTIAL CONTRIBUTION OF THE STUDY

The results from this study will assist a number of individuals; (i) leaders/managers, (ii) employees, (iii) organizations (iii) the government as well as policy makers. It is envisaged that this study will add to the current knowledge on the constructs explored in this study and employee engagement. The theoretical model of the relationships being tested would also assist leaders to understand the short and long term effect of their leadership style on both the employee and the organization and employees would be aware of the role of positive organizational behaviours as a tool for employee engagement. Furthermore, the management, employers and employees would be aware of the effect that both positive and negative psychological climates may have on the organization. It is also envisaged that the nature of this research would possibly indicate effective strategies that are appropriate for organizations in Africa.

1.15 STRUCTURE OF THE DISSERTATION

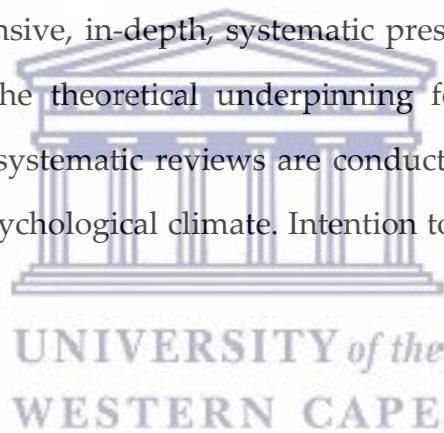
This dissertation comprises five chapters.

CHAPTER 1

This chapter comprises of an introduction, background to the study, a brief highlight of the research constructs under study, research questions and problem, the rationale for the study, objectives of the study, research hypotheses, delimitation of the study and the structure of the thesis.

CHAPTER 2

In this chapter, a comprehensive, in-depth, systematic presentation of extant literature is provided. This acts as the theoretical underpinning for which the model being studied is proposed. Three systematic reviews are conducted on authentic leadership, psychological capital and psychological climate. Intention to quit is also conceptualized and discussed.



CHAPTER 3

Chapter three outlines the methodology used in testing the conceptual model that was developed for this study. The research design, sampling strategy, research hypotheses, data collection procedures, measuring instruments, the statistical analyses, item and dimension analysis and how to deal with missing values were exhaustively discussed.

CHAPTER 4

The results obtained from the data analyses and the statistical hypotheses are presented in this chapter.

CHAPTER 5

This chapter which is also the concluding chapter, addresses and discusses the research findings obtained in the previous chapter. The practical implications and the limitations of the study are presented.

1.16 CONCLUSION

Several authors, Bakker and Schaufeli, (2008); Salanova, Agut, and Peiró, (2005); Schaufeli and Bakker, (2004;) Xanthopoulou et al., (2009) have ascertained that engaged employees are passionate about their work and display high levels of energy and have thus prescribed work engagement as a major antidote to work dissatisfaction, stress, employee turnover or quitting intentions.

The assumption underlying the present study therefore is that the proposed antecedents - authentic leadership, psychological capital, psychological climate and turnover intention, all have an impact on the work engagement of employees. This study aims to explore, develop and test an integrated model of relationships that exist between authentic leadership, psychological capital, psychological climate and work-engagement which has not been specifically investigated especially in a Nigerian sample.

Providing a theoretical model of the relationships between these antecedents and work engagement, the researcher envisages that the study will contribute to the literature regarding the development of work engagement and postulate theoretical and practical implications for the field of industrial and organizational psychology.

Consequently, this study would explore the effects of the constructs - authentic leadership, psychological capital, psychological climate and intention to quit on work engagement in the banking industry. This study would be focusing on psychological capital and psychological climate as mediating variables between authentic leadership and work engagement whilst intention to quit would be a moderating variable.



UNIVERSITY *of the*
WESTERN CAPE

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter provides three systematic literature reviews and a conventional literature review of the constructs considered in this study. It extensively discusses extant studies on the relationships between authentic leadership and work engagement, as well as psychological capital and work engagement, psychological climate and work engagement and intention to quit of employees. This chapter describes the specific steps taken to obtain the results from the extensive literature search. The aim of embarking on this type of search was to fully appreciate previous work that had been carried out on the constructs under study and also to either disprove or approve the conclusions made by other researchers and scholars.

2.2 RELATIONSHIPS BETWEEN VARIABLES OF THE PROPOSED STUDY

Wang, Sui, Luthans, Wang and Wu (2014), has established from data collected from 794 followers and their immediate leaders that authentic leadership is positively linked to leader–member exchange (LMX) and therefore their followers' performances. This conclusion is also true among followers who have low levels of PsyCap (Wang et al., 2014). A separate study that empirically validates the integration of authentic leadership and psychological capital in research, which is also a pointer that both constructs may cultivate employees' creativity, is on 201 employees who reported their psychological capital and their supervisors' authentic leadership (Rego et al., 2012). Findings depicted that authentic leadership through the mediating role of employees' psychological capital directly predicts employees' creativity. Authentic leadership has been found to be positively related to followers' PsyCap (Woolley, Caza, & Levy, 2011).

These authors also established a positive relationship between authentic leadership and the psychological capital of followers when partially mediated by positive work climate, and gender. Findings reinforce previous predictions of the impact of authentic leadership and authentic leaders on followers (Leroy, Anseel, Gardner, & Sels, 2015; Lyubovnikova, Legood, Turner, & Mamakouka, 2017).

According to Bakker and Schaufeli (2008), positive organizational behaviour research focuses on high performance in organizations and explores the conditions under which employees excel. Research indicates that organizations experience undesirable consequences as a result of low levels of work engagement (Geldenhuys, Łaba, & Venter, 2014; Robertson & Cooper, 2010). Such consequences include low productivity, and high levels of employee absenteeism and turnover. A meta-analysis conducted by Avey, Luthans and Jensen (2009) shows that PsyCap is positively related to pleasant employee attitudes and vice-versa. A positive relationship between PsyCap and Work Engagement has also been established (Xanthopoulou et al., 2009).

Whilst Covey, and Gratton, as cited by Bakker et al., (2008), agreed that present day organizations are in dire need of engaged employees, Bakker, Demerouti and Verbeke (2004) proved that engaged employees are ranked high by their colleagues on “in-role and extra-role” performances. This adds up that engaged employees are “go-getters” and are inclined to exceeding expectations. In a meta-analysis of studies in almost 800 business units of 36 companies, Harter et al., as cited by Bakker et al. (2008, p. 151), demonstrated that employee engagement is positively related to performance including customer satisfaction, loyalty, profitability, productivity, turnover, and safety. It was concluded in that study that engagement is “related to meaningful business outcomes at a magnitude that is important to many organizations.” Furthermore, work

engagement has been identified as one of the critical requirements for people performance in organizations (Bakker & Schaufeli, 2008; Hoole & Bonnema, 2015; Rothmann & Rothmann Jr, 2010).

Literature on Psychological Climate highlights the relationship between Psychological Climate perceptions and its relationship to a variety of individuals' level outcomes in the organization like job satisfaction, organizational citizenship behaviour, job involvement, motivation, psychological well-being and employee performance (Biswas, 2012; Parker et al., 2003; Witt, 2013). It is therefore hypothesized that there will be a positive relationship between authentic leadership and psychological climate.

Schaufeli and Bakker (2004), confirm the relationship between work engagement, burnout and turnover intention as well known and accepted. There have been prolonged studies in Organizational Behaviour which have propelled an understanding of employee assessments of the work environment and how these assessments impact individuals' attitudes at work (Schulte, Ostroff, & Kinicki, 2006).

It is thus evident that literature has revealed quite a number of relationships among the constructs being investigated in this study. However, this present study explored, developed and tested an integrated model of the relationships that existed between authentic leadership, psychological capital, psychological climate, turnover intention and work-engagement which had not been specifically investigated especially in an African sample. A systematic literature review which is a relatively new dimension of reviewing previous research especially in the social sciences is also a gap that this study sought to fill. Systematic reviews are literature reviews that utilize explicit methods to identify, collate and critically scrutinize available studies as a means of proferring

solution to research questions. These methods are based on a set of predetermined criteria.

2.3 THE RELATIONSHIP BETWEEN AUTHENTIC LEADERSHIP AND THE EMPLOYEE ENGAGEMENT OF EMPLOYEES: A SYSTEMATIC REVIEW

2.3.1 Introduction

Scholarly literature, management professionals, and political leaders alike have recognized and progressively sought for ways and means in which employee work engagement can be fostered. Researchers and organizations have noted the importance attributable to work engagement in terms of business success and organizational growth (Jiang & Men, 2015; Markos & Sridevi, 2010; Pati & Kumar, 2010). It is apparent that when engaged employees are at work, they demonstrate tenacity at work, unflinching support for the management and a readiness to devote extra effort and time to organizational goals (Saks, 2006; Serrano & Reichard, 2011).

Although several factors have been noted to drive employee engagement, existing literature such as Men and Stacks (2013); Shuck and Herd (2012) have identified leadership as a key organizational factor that could influence and foster employee engagement. These authors have explained that organizational contextual components: stability, progress, culture, communication, gender equality and employees' work attitudes among several others are hinged upon organizational leadership. Strategic leadership has been described as a direct or indirect tool for structure, culture and communication in an organization (Men & Stacks, 2013; Yukl, 2008) with different

forms of leadership styles advocated as appropriate and effective for communication, influencing employees and achieving varied organizational purposes. Essentially, leaders who are committed and engaged with their followers, produce unimaginable feats and substantial achievements in their workplaces (Breevaart et al., 2014; Shuck & Herd, 2012; Zhang & Bartol, 2010). To this end and for this review, leadership amongst other antecedents has been touted as highly instrumental in facilitating the sustainability of an engaged workforce in any organization.

Recent studies indicate that leadership – the art and act of guiding or propelling organizations or a group of people towards positive employee outcomes (Breevaart et al., 2014; Ghafoor, Qureshi, Khan, & Hijazi, 2011; Shuck & Herd, 2012; Zhang & Bartol, 2010). The emergence of several positive forms of leadership such as Transformational leadership theory which has been in the limelight as one of the most predominant leadership theories in the recent past (Mhatre & Riggio, 2014), has also been proposed as highly beneficial for positive organizational outcomes. This leadership style has been stated to meet the higher-order needs of followers (Banks, McCauley, Gardner, & Guler, 2016) because it equips and develops in followers the importance of putting the organization's interest or goals above theirs and to effectively occupy and carry out leadership functions (Jung & Avolio, 1999) whilst authentic leadership has been suggested to be more oriented with developing leaders self-esteem, self-confidence and personality (Avolio & Gardner, 2005). Banks et al., (2016) submit that an authentic leader sometimes may not have inspirational or charismatic qualities like the transformational leader who tries to create an exquisite picture of an attainable goal thereby motivating and stimulating followers to be high achievers. After years of back and forth consultations and modifications, four dimensions of transformational leadership have been proposed. These are: a) Idealized influence – behaviours

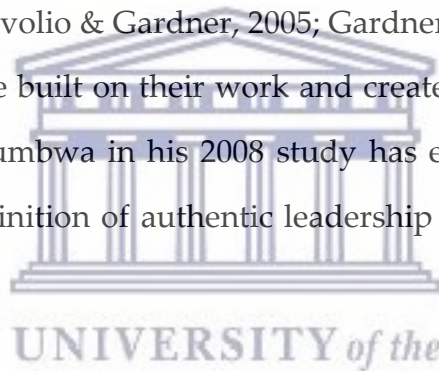
channeled by the leader that encourage followers to identify more with the leadership, b) Inspirational motivation – capacity by the leader to create an attainable vision that inspires followers to be high achievers, c) Intellectual stimulation – ability of the leader to break away from a mediocrity mindset, create creativity followership and challenge followers to take risks and d) Individual consideration – attention cultivated by the leader to attend to the specific needs of the followers by acting as a mentor with listening ears (Judge & Piccolo, 2004).

Although authentic leadership construct is not a new theory, there are still few divergent opinions about what authentic leadership really portrays and how it stands out from other effective leadership styles like transformational leadership. It has even been argued that conceptually, authentic leadership intersects with some other forms of positive leadership behaviours (Avolio & Gardner, 2005). Furthermore, Avolio and Gardner (2005) expressed that authentic leadership behaviours form a basis and a solid foundation for which sincere transformational leadership behaviours can be constructed. Therefore, in spite of the few similarities between authentic leadership and transformational leadership, and the expectation from followers to see ideal role models and inspirers in their leaders which both leadership behaviours depict in some way or the other, both constructs are still distinguished by well-defined differences.

Consequently, despite the few dissenting opinions that persist, most scholars have accepted authentic leadership and its four dimensions as a distinct, separate leadership construct (Gardner, Cogliser, Davis, & Dickens, 2011; Klenke, 2007; Yammarino, Dionne, Schriesheim, & Dansereau, 2008) with some researchers engaged in refining its theoretical models (Gardner et al., 2005; Ilies et al., 2005), some in redeveloping its measures of assessment (Luthans et al., 2007; Neider & Schriesheim, 2011; Walumbwa

et al., 2008) and others preoccupied with testing for antecedents, consequences, mediators, and moderators (Alok, 2014; Gardner et al., 2011).

Luthans and Avolio (2003) have referred to authenticity as the congruence between what one says, is and does (Alok, 2014) whilst (Walumbwa et al., 2008) has conceptualized the construct as behaviours that is typified by a robust self-awareness, uncommon relational transparency, exceptional internalized moral perspective and an unequivocal balanced information processing for ethical decision making. Although the authentic leadership theory developed by Luthans and Avolio (2003) is priceless as it promoted scholarly attention and provided a significant basis for the leadership construct, several authors (Avolio & Gardner, 2005; Gardner et al., 2005; Ilies et al., 2005; Walumbwa et al., 2008) have built on their work and created a better understanding of the construct of which Walumbwa in his 2008 study has endeavoured to produce the most generally accepted definition of authentic leadership within the literature (Banks et al., 2016).



Avolio et al., (2004) proposed that authentic leaders serve as “superstars” who operate with objectivity and integrity towards their followers. This stance is reiterated by Saks (2006), who indicated that when leaders or employers encourage ethical decision making and an increased participative information dissemination through authentic leadership behaviours, employees have a tendency to be more engaged at work. It is against these underpinning discussions that this study extensively sought for studies that considered the relationship between authentic leadership behaviours and work engagement. This was undertaken to proffer a better, clearer, and more consensual empirical perspective of the relationship and impact of authenticity and its four dimensions with regards to employee engagement.

2.3.2 A Systematic review of the relationship between authentic leadership and work engagement

To the best of the knowledge of the researcher, there had been no systematic review to date that has been conducted on the relationship between authentic leadership and work engagement.

2.3.3 Authenticity

Harter dated back authenticity as a concept to the ancient Greek philosophers who described the term to mean “Know thyself” and “To thine own self be true” (Avolio et al., 2004) although (Ilies et al., 2005) differed indicating that authenticity far exceeds being true to oneself. Harter, (2002, p. 382) classified authenticity as “owning one’s personal experiences, be they thoughts, emotions, needs, preferences or beliefs, processes captured by the injunction to know oneself”, whilst Alok and Israel, (2012) indicated that it is consistency between statements and actions. Kernis, (2003) stated that authenticity consisted of four components, namely: a) Having an unbiased acceptance of one’s own potentials, strengths, weaknesses and failures, (b) Having a sense to behave in accordance with one’s own true self as against a desire to please others, attain rewards or avoid punishment, (c) Having a complete understanding of one’s desires, moral ideals, feelings, and responsibilities, and (d) Having sincere, truthful, transparent, interpersonal relationships with others.

2.3.4 Authentic Leadership

Using the theory and concept of authenticity, Luthans and Avolio (2003) described authentic leadership as a process in which “self-awareness and self-regulated positive behaviours on the part of leaders and associates, fostering positive self-development” are core components of its leadership style. Alok and Israel, (2012) added that an authentic leader is resilient, always futuristically hopeful, trustworthy, sincere,

dependable, genuine, confident, and honest in dealing with associates and followers. An authentic leader prioritizes developing followers to think and act as leaders. Jung and Avolio, (1999), support that authentic leaders are guided by their deep seated principles and standards, thereby enhancing and fostering the confidence, admiration and reliability of followers such that varied, multifaceted perspectives and collaborative relationships are encouraged. These breed of leaders have been described as being acutely aware of their personality such that they demonstrate integrity and transparency about who they are, and they act in conformity with their beliefs, values, opinions, and motives (Walumbwa et al., 2008). Additionally, Jensen and Luthans (2006), indicated that there are three essential qualities that must be present in an authentic leader amongst other things: an authentic leader must be original and not an imitation of another, the authentic leader's actions are propelled by personal values and standards, and they are driven and inspired by their own belief, system and principles instead of reputation, desired prominence or gains. These actions exhibited by an authentic leader will subsequently propel the employees or the followers to act in a similar authentic manner, which consequently may become a basis for the "organization's culture."

The significance and impact of leadership integrity cannot be overemphasized with the increase of "corporate scandals and unethical roles" being displayed by managers and organizational leaders across the continents of the world today. Authentic leadership therefore has been seen as a leadership style that reflects the true nature of a person, high level of credibility, purpose, moral and core values (Hassan & Ahmed, 2011). As a result, they promote a more trusting relationship in their work groups that translates into several positive outcomes.

2.3.4.1 *Conceptualizing Authentic Leadership (AL)*

In this study, authentic leadership is conceptualized based on the four-component theoretical model of authentic leadership from the works of (Gardner et al., 2005; Ilies et al., 2005; Luthans & Avolio, 2003; Walumbwa et al., 2008) as “ a pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development (Walumbwa et al., 2008, p. 94). Authentic leadership has been conceptualized with four leadership behaviours such as:

Self-awareness – having a proper understanding of one’s own values, strengths, goals, endowments, inadequacies and limitations (Gardner et al., 2005; Ilies et al., 2005) whilst being knowledgeable on how to relate effectively with the social world based on one’s own multidimensional nature (Walumbwa et al., 2008)

Relational transparency – the extent to which the leader strengthens a level of honesty and sincerity with others such that they are motivated to eagerly share their opinions, ideas and challenges. This nature is obtained when an individual is straightforward and truthful in relating and disseminating information regarding one's actual emotions and thoughts (Walumbwa et al., 2008).

Balanced information processing – soliciting sufficient viewpoints and then objectively analyzing all the relevant views before reaching a conclusion (Walumbwa et al., 2008).

Internalized moral and ethical perspective – traits and characteristics expressed in decision making which corresponds to these core ideals and principles. This is firmly

attached on self-regulation in consonance with one's deep-seated mission and an aspiration to make a tangible difference (Banks et al., 2016; Shamir & Eilam, 2005; Walumbwa et al., 2008).

Gardner et al. (2005) and Ilies et al. (2005) confirmed that these four components of Authentic Leadership (AL) are crucial and must be exhibited by the leader to be considered as authentic. These authors assert that these four components when merged together would have an additive effect on one another, which means that the four components when displayed together are greater than the sum of the individual parts. Authentic leaders show to others that they have a genuine desire to grow in self-awareness and understand their own leadership in order to serve others more effectively (George, 2003). Authentic leaders would regulate their behaviour and act in accordance with deep personal values and convictions to build credibility, respect and trust in their followers. These authentic leaders would also practice balanced processing by encouraging diverse points of view, which have the capacity to build networks of collaborative relationships with followers (Avolio et al., 2004; Walumbwa et al., 2008). To this extent it has been empirically confirmed that authentic leadership is a second-order or higher-order construct (Caza, Bagozzi, Woolley, Levy, & Caza, 2010; Walumbwa et al., 2008).

Extant evidence indicates that employees are most likely to be content, work better together and assist their leader to accomplish high levels of performance when such a leader exhibits authentic behaviours by being conscious of moral ideals and acting upon such values and beliefs (Banks et al., 2016). Consequently, authentic leadership theories have been linked to improved task performance (Banks et al. 2016; Leroy, Anseel, Gardner, & Sels, 2015) and regarded as the strongest single predictor of employee job

satisfaction, organizational commitment and work happiness (Jensen & Luthans, 2006). Subsequently, Ilies, Curşeu, Dimotakis, and Spitzmuller (2013) reiterate that in view of several significant performance-related outcomes, it is most expected that leaders that are authentic in nature would be more effective.

2.3.4.2 Inconsistencies, Contentions and Disputations regarding Authentic Leadership

Studies reviewed have depicted that some controversies might have arisen from the conceptualization of authentic leadership as a construct. Luthans et al., (2007) reported the PsyCap construct as an antecedent as well as a consequence of authentic leadership. The authors explored the possibilities of including authenticity as part of the dimensions of PsyCap.

Operationalizing and measuring the authentic leadership construct has also brought about some controversies in the academia (Avolio & Gardner, 2005; Gardner et al., 2005; Harter, 2002; Yammarino et al., 2008). In general terms, the AL is measured by administering the measuring instrument to the followers where the followers then indicate their thoughts on their leader. This is done without consultations with the leader (Goffee & Jones, 2005). This measure is inconsistent and contrary to the definitions of authenticity that has been perceived as personal and subjective in nature. Douglas, Ferris, and Perrewe (2005) asserts that when followers assess their leaders' authenticity, their findings may be incorrect and may not correctly identify or portray the leader's personality or leadership style.

The question of whether authenticity is possible in the actual sense of it has also been speculated (Sparrowe, 2005). Algera and Lips-Wiersma (2012) and Guthey and Jackson (2005) gave some caution as to the implications of focusing on who an authentic leader

is when there is yet no clear distinction of how much authenticity can a human being really demonstrate. It has also been assumed that when a leader purposely seeks to be authentic, that state of mind in itself might have defied the real essence of authenticity.

Furthermore, Avolio and Mhatre (2012) and Caza and Jackson (2011) also indicated that literature has assumed that an authentic leader produces only desirable outcomes, however, further research and clarifications should be made to reveal the not so desirable elements of authentic leadership if there are any (Du Plessis, 2014). These complexities and possible confusion of multi-functional relationships have been identified as areas that needs to be explored (Gardner et al., 2005; 2011).

2.3.5 Work Engagement

It is crucial in today's day and time especially in the business front that employees' well-being be prioritized and catered for so that customers will be satisfied and the organization will remain productive. When employees are happy and have positive feelings about their work, they would be engaged and energetic at their place of duty. This attitude is likely to initiate success for the organization. Employee Engagement brings about a highly competitive advantage over others that consequently precedes excellent performance. Employee engagement depicts the amount of devotion and loyalty employees portray towards their organization and its ideals. Furthermore, the "active use of emotions" and "intellectual commitment" aids engagement the workplace (Azoury, Daou, & Sleiaty, 2013). It is noteworthy that positive emotions like joy, confidence, trust, anticipation most likely will trigger employee engagement. Workers with positive emotions drive engagement because they tend to focus on the end-result and objective of the organization rather than the situations at hand. Gallup adds that employees who are skilled and gifted, high achievers, creative, exhibiting

novel ideas, passionate, and inquisitive about their duties at work are more likely to be engaged rather than their colleagues who are not (Azoury et al., 2013). Although Shuck and Wollard (2010) has touted engagement to mean the positive motivation of employees emotionally, cognitively and behaviourally with regards to organizational outcomes, Saks (2006) has emphasized that in addition to positive organizational outcomes employee engagement also exhibit positive individual outcomes. It indicates that employees are emotionally, physically and cognitively present at work and are highly absorbed committed to work. Furthermore, Saks (2008, p. 41) using the negligence of the flight crew of the U.S. Comair Flight 5191 that crashed in August 2006 at Bluegrass Airport in Lexington, Kentucky, stated that “engagement is not about being innovative or doing more and doing things differently; it is about how well you do what you are supposed to be doing.”

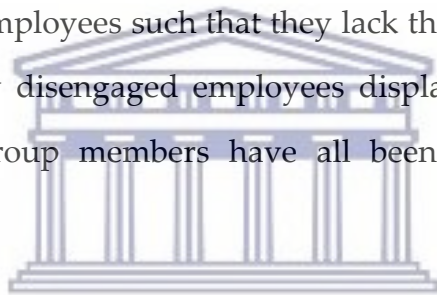
2.3.5.1 Definitions of Work Engagement

Although Du Plessis (2014) and Gallup Workplace research asserts that the term “employee engagement is more widely accepted than work engagement” and therefore may not be similar. However, burgeoning studies (Albrecht, 2013; Azoury et al., 2013; Bakker, Albrecht, & Leiter, 2011; Bakker & Leiter, 2010; Harter, Schmidt, & Hayes, 2002; Kahn, 1990; Maslach & Leiter, 2008; Schaufeli et al., 2002), have not indicated any specific demarcation between these two constructs and are yet to ascertain that the term “work engagement” (Bakker, 2011), “employee engagement” (Albrecht, 2013; Shuck & Wollard, 2010) and even “job engagement” (Schaufeli & Bakker, 2004) are clearly different from each other in definition and contextualization. Most extant literature have used these terms interchangeably to indicate engagement at the workplace.

Several scholars and burgeoning studies have defined work or employee engagement with varied theoretical frameworks to better understand the construct. Kahn (1990, p. 694) referred to Employee engagement as “employees’ investment of physical, cognitive, and emotional energy and their full deployment of themselves into their work roles or tasks.” Schaufeli et al. (2002, p. 74), defined work engagement as “a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption.” The authors emphasized that engagement denotes “a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behaviour” (Schaufeli & Bakker, 2003, p. 4-5) As a deviation from those who suffer from burnout and exhaustion, engaged employees are so engrossed and connected with their work activities such that they see themselves as capable of managing their jobs demands. Lipman (2013) and Harter, Schmidt and Hayes (2002) suggests that an engaged worker is involved, takes the initiative and makes positive, enthusiastic, productive impact on the work and the organization. Engaged individuals are enthusiastically content with assigned tasks such that they go all out in achieving their and organizational goals. Based on Schaufeli’s conceptualization of engagement, Christian, Garza, and Slaughter (2011, p. 95) defined WE as “a relatively enduring state of mind referring to the simultaneous investment of personal energies in the experience or performance of work whilst Wellins and Concelman suggests that WE is “the illusive force that motivates employees to higher (or lower) levels of performance” (Little & Little, 2006).

A review of literature indicated different facets and dimensions of engagement. For instance, Kahn identified three dimensions of employee engagement, which is meaningfulness, safety and availability (Kahn, 1990) Another study identified eight dimensions of engagement which is, valued work, supportive climate, feelings,

recognition, justice, work-load, meaningful and control (Maslach & Leiter, 2008). Three processes were also outlined which involve: a positive conversation by the management with all employees, the continual desire to be a part of the organization and the determination to make a valued contribution to the organization (Hewitt, 2014). Rich, Lepine, and Crawford (2010) also indicated three dimensions that involve the full energetic and implementation of a person's cognitive, emotional and physical resources. Mercer's four-stage engagement process involves being: Satisfied, Motivated, Committed and Advocate (Mercer, 2015) whilst Gallup's three-type engagement, namely: an in-depth relationship between engaged employees and their team in which they are willing and enthusiastic to participate and bring about an appreciable progress; passiveness in unengaged employees such that they lack the energy to put in their best; and inert attitudes whereby disengaged employees display a contagiously unhappy, inactive nature to other group members have all been advanced in literature as dimensions of engagement.



Kahn's needs-satisfying approach expatiates that employees are obliged to keep to themselves and not make any meaningful contribution to the organization when they perceive that they are being ignored by the management. This situation consequently leads to non-engagement. The observable natural reaction to a positive cognitive evaluation of the situation at the workplace and the readiness to devote one's personal resources to an organization's course breeds engagement (Kahn, 1990). Kahn's approach, which serves as basis for several existing works on engagement proposes that WE is a situation whereby employees' personal attributes and personalities are invested into a work role such that an emotional relationship is developed with the task. This allows for an all-inclusive, synchronized relationship in which mind and body is utilized in these work roles (Christian et al., 2011; Kahn, 1992; Rich et al., 2010). Kahn

emphasized that sustaining a connection with work tasks rather than work conditions and individual's self-investment of personal resources at work roles promotes engagement (Christian et al., 2011; Rich et al., 2010). Engaged employees set their heart and mind on their work duties and push to get results.

Bakker and Demerouti explained the antecedents and consequences of work engagement based on the popular Job Demands – Resources (JD-R) model. The model justifies that job resources (Support, Autonomy, Feedback) and or personal resources (Self-efficacy, Optimism, Self-esteem, Resilience) will aid engagement at the workplace. The model asserts that job and personal resources could act as a lubricant for job demands (Mental, Emotional and physical demands) such that work engagement is still achieved. Consequently, engagement leads to performance outcomes which can result in a feedback loop such that the individual is further supported and reinforced to create stronger personal resources which could breed a positively prolonged circle of employee engagement (Bakker & Demerouti, 2007; Du Plessis, 2014). Although this model has been largely supported by many authors, Schaufeli and Taris (2014, p. 43) cautions that there were still several crucial unresolved issues relating to the JD-R such as “the model's epistemology, status, the definition of and distinction between “demands” and “resources,” the incorporation of personal resources, the distinction between the health impairment and the motivational processes, the issue of reciprocal causation, and the model's applicability beyond the individual level”.

Macey and Schneider (2008) define employee engagement as a “discretionary effort or a form of in-role or extra-role effort or behaviour” (p. 6). Engagement was also proposed as a psychological state which is more of a multifaceted construct that metaphorically blends different kinds of wine into an improved, ideal, cocktail-kind construct (Saks,

2008). Essentially, engagement is more than just having “old wine in a new bottle”, rather, it is an umbrella name for “job satisfaction, organizational commitment, psychological empowerment, job involvement” (p.7). The authors explain that engagement is a state, trait or behavioural construct with the state engagement being feelings of energy, absorption and satisfaction that is being affective, involvement, commitment and being empowered at work. Trait in the sense of having “positive views of life and work” – having a creative, proactive personality, and being conscientious whilst the behavioural kind of engagement indicates the extra-role behaviour such as Organizational Citizenship Behaviour (OCB), being proactive and exhibiting personal initiative and having an adaptive nature at work. However, Saks (2008) negates the stance taken by Macey and Schneider in that these definitions breeds more confusion into an already confused construct because researchers are then left to speculate which of the kind of engagements should be measured. Saks insists that Macey and Schneider overall definitions are inconsistent with literature on engagement.

2.3.5.2 Inconsistencies, Contentions and Disputations regarding Work Engagement

Although most researchers have identified work engagement as being multi-dimensional in nature, there is minimal consensus and clarity as to what constructs accurately represents work engagement. Furthermore, some authors have indicated that engagement is a word that is casually used in the business environment and could be easily mistaken for other positive organizational outcomes such as commitment, job satisfaction, and productivity (Bakker et al., 2008).

Closely related to this, are the several definitions that have been attributed to work engagement (WE). As highlighted earlier, many authors (Harter et al., 2002; Kahn, 1990; Schaufeli et al., 2002) are yet to come to a consensus about this (Christian et al., 2011).

The inconsistencies that have emerged around the definitions and conceptualizations of WE further sustain confusions as to the empirical and conceptual difference between WE and other similar constructs (Christian et al., 2011; Dalal, Brummel, Wee, & Thomas, 2008; Macey & Schneider, 2008). However, studies have repeatedly utilized Schaufeli's definition and touted it as the most accepted, although several criticisms still ensue. For example, Bakker et al. (2011) propose that more work should be carried out on the dimensions of work engagement like absorption. The authors stated that it is needful to ascertain whether absorption is one of the sub constructs of Work Engagement (WE) or an outcome of efficacy and energy. Furthermore, Demerouti, Mostert, and Bakker (2010) are of the opinion that the sub constructs of WE and burnout are so similar that it is auspicious for both constructs to be measured by the same measuring instrument and not different ones (Du Plessis, 2014).

The factor structure of UWES has also been called into question as to its consistency and accuracy especially over different samples. Literature by Rothmann and Jordaan (2006) have posited that a two factor structure best fits the UWES whilst Bell and Barkhuizen (2011); Stander and Rothmann (2010); Wefald and Downey (2009a) have established that a one factor structure would be most appropriate for the UWES. Discussions around the most suitable factor structure for the UWES still persists with virtually every new study on the dimensionality of the UWES coming up with its most suitable version. Christian and Slaughter (2007), however, deduced in a meta-analysis conducted on WE that the high score obtained for the mean corrected inter-item correlation of the three sub constructs of WE presumably suggest that a one dimensional measurement of WE would be most beneficial for future research purposes (Du Plessis, 2014).

Criticisms have been raised as to how to demarcate between work engagement and workaholism. A workaholic is a compulsive, obsessive worker that may not only enjoy doing the work but also feels compelled and constrained to do it. Few authors therefore caution that work engagement may be linked to negative performance and outcomes if not properly channeled or managed (Bakker & Bal, 2010; Halbesleben, Harvey, & Bolino, 2009). Apparently, not all highly engaged individuals become workaholics but the inability to draw a line between high engagement at the workplace and workaholism could be detrimental to not only the individual but to the family and the organization as well. This assertion was however contradicted by Culbertson, Mills, and Fullagar who indicated that high levels of work engagement would not lead to workaholism but rather to positive home-work-family outcome (Culbertson et al., 2012; Du Plessis, 2014).

Of utmost importance also is the controversy around defining and conceptualizing engagement as a “temporarily dynamic state” or as a relatively stable trait”. Schaufeli (2013); Schaufeli et al. (2002) conceptualized engagement as a trait that brings about individual differences which is relatively stable over time, however, studies have indicated that engagement bears moderate fluctuations on a day to day basis (Sonnentag, 2003). This latter state, Christian and Slaughter (2007) asserts is in line with Kahn that suggests that engagement flows and recedes, fluctuating or varying both within and between persons. Macey and Schneider (2008) subscribe to both conceptualizations of WE but they caution that researchers and practitioners must be certain and aware as to the type of engagement they are proposing.

2.3.5.3 *Conceptualizing Work Engagement (WE)*

In this study, WE is conceptualized on the definitions of Schaufeli et al. (2002, p. 74) in which work engagement is classified as “a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption”. The dimensions of WE are measured with 17 items using the Utrecht Work Engagement Scale (UWES) by (Schaufeli et al., 2002). The authors conceptualized WE with three core positive dimensions such as:

Vigour

Having a profusion of energy, enthusiasm, staying power, commitment, and the readiness to devote one’s effort at work. The ability not to easily tire out and persistence despite being confronted with difficulties.

Absorption

Attachment and an unreserved immersion in one’s work such that time passes away rapidly whilst pleasantly engrossed at work.

Dedication

Having a strong, robust participation in work, deriving a sense of fulfillment, achievement and pride in work done and being inspired, challenged and energized to do more.

2.3.6 **Rationale for the review**

Studies have suggested the positive outcomes that result from positive forms of leadership in relation to organizations and employees in particular (Antino, Gil-Rodríguez, Rodríguez-Muñoz, & Borzillo, 2014; Tims, Bakker, & Xanthopoulou, 2011).

This review thus sought to bring into emphasis the relationship between the authentic leadership style and work engagement and most importantly to understand what kind of relationships exist among these two constructs. In essence, will authentic leadership sufficiently impact or foster work engagement in organizations or is the relationship between AL and WE better facilitated by other mediating factors?

2.3.7 Aim of the review

The aim of this review was to systematically review and synthesize literature regarding authentic leadership and work engagement. The review was concerned with establishing an empirical, systematic, comprehensive report of the authenticity, authentic leaders, and the engagement of employees at their workplaces. This review focused on published empirical studies conducted from the year 1990 to 2015.

2.3.8 Review Question

What kinds of relationships exist between an authentic leadership style and employee engagement within an organization?

2.3.9 Methods

2.3.9.1 Terms and Definitions

The Keywords that were included within the systematic review were: authentic leadership, authentic leader, work engagement, job engagement, employee engagement, and engagement.

TABLE 2.1*Terms and Definitions: AL & WE*

| Terms | Definitions |
|-----------------------------|---|
| Authentic Leader/Leadership | A pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development (Walumbwa et al., 2008) |
| Work engagement | A positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption (Schaufeli et al., 2002). |
| Job engagement | Positive psychological state of fulfillment with one's tasks at work. It is characterized by involvement, satisfaction, and enthusiasm (Wefald & Downey, 2009b). |
| Employee Engagement | Employee engagement, defined as the process of positively motivating employees cognitively, emotionally, and behaviourally toward fulfilling organizational outcomes (Shuck & Wollard, 2010). |

**2.3.9.2 Article Search**

The articles indexed in eight electronic databases were included: EBSCOhost Online Research Databases – (Academic Search Complete, Business Source Complete, and PsycARTICLES), Science Direct, Wiley Online Library, Scopus, SA ePublications, SAGE Journals Online and Google Scholar. These databases from 1st January 1990 to 31st December, 2015 were utilized in searching for articles. The first seven electronic databases were used for the initial, comprehensive search whilst the Google Scholar was used to compliment the searches in order to locate the complete articles that had been identified by the above listed seven search databases. Included in these databases were national and international journals such as Journal of Leadership &

Organizational Studies, Journal of Advanced Nursing, Social Behaviour & Personality, Journal of Nursing Management, Australian Journal of Management, South African Journal of Psychology, The Leadership Quarterly, Journal of Nursing Administration, Journal of Organizational Behaviour, and Journal of Leadership & Organizational Studies.

2.3.9.3 *Inclusion criteria*

Included studies were identified and selected on the basis of their titles, abstract, and keywords. Subsequently, these different literatures were included in the review based on their eligibility. The eligibility criteria were:

- **Publication Date** – Only studies published between 1990 and 2015 were considered as eligible. Pilot searches earlier conducted indicated that there were no studies on authentic leadership and work engagement prior to 1990. In addition, since this review was carried out in 2016, studies were therefore limited to 2015.
- **Language** – Only studies published in or translated to the English language were considered. Wilson, Lipsey, and Derzon (2003) observed that this is a commonly used concept for systematic reviews in view of the difficulties that could be encountered in translating and replicating the review.
- **Type of studies** – Only studies that considered the relationship between authentic leadership or the authentic leaders, managers, employees or followers of all ages in any type of organization or institution with employee engagement, work engagement, and job engagement were considered. Search terms such as authentic leadership, authentic leader, engagement, employee engagement, work engagement, job engagement in their title, abstract or body text were included. Since, the choice of particular words could influence the results of a review,

therefore only closely related words were included to further enrich the literature search. However, only studies which explicitly refer to authentic leadership and work engagement were focused upon. Studies which did not refer to such words or focused only on authentic leadership or work engagement in itself were not included.

- **Publication status** - Only peer-reviewed journal articles were included so as to ensure a high level of quality.
- **Study design** - Only experimental studies were included in the review.

2.3.9.4 Exclusion criteria

Literature that was excluded from the systematic review included:

- Unpublished studies,
- Studies published prior to 1990 and later than 2015, (2016 was included in the other two systematic reviews in this study)
- Studies that included other factors impacting employee engagement aside from authentic leadership and vice-versa,
- Studies carried out singly on authentic leadership or work engagement that did not impact on the other construct.

2.3.9.5 Study Selection/ Search and Retrieval Process

This rigorous, extensive search generated 1385 articles. The titles, abstracts, and keywords of these articles were reviewed out of which 1213 studies were excluded at this stage because they did not meet the eligibility criteria and only 172 articles indicated their relevance to the topic under study. Some of the studies excluded were because they touched on authentic leadership only or work engagement only or were impacted by other constructs among other things. Other studies excluded at this stage

bordered on the fact that they were conceptual studies or reviews also. Out of 172 articles, only 18 articles were meticulously read as the difference of 154 articles were duplicates from the different databases that were used. 18 articles were finally screened and analysed with the adapted version of the Methodological Quality Appraisal Tool (Roman & Frantz, 2013). Finally, 4 articles were excluded based on the Methodological Quality Appraisal Tool and only 14 articles was used for the review.

2.3.9.6 Methodological quality appraisal

The methodological quality was assessed using the methodological quality appraisal tool adapted from Roman and Frantz (2013). The methodological quality appraisal tool was used to evaluate the sampling methods, response rate, validity and reliability of the measuring tool and also the data source. A possible inclusion within the review is considered when the methodological quality appraisal score is obtained as satisfactory or good.

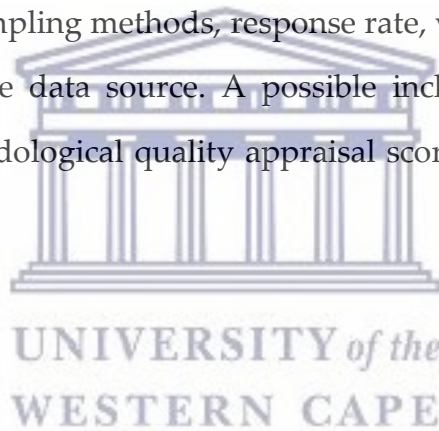


TABLE 2.2

Methodological Quality Appraisal Tool: AL & WE

| Articles | Authors | Sampling method: Was it representative of the population intended to the study? | Was a response rate mentioned within the study? (Respond no if response rate is below 60) | Was the measurement tool used valid and reliable? | Was it a primary or secondary data source? | Was Authentic Leadership looked at within the study? | Were the relationship /association between Authentic Leadership and Work Engagement explored? | Calculation | Total | Comments |
|---|------------------------|--|--|---|--|--|---|-------------|--------|----------|
| Creating an Engaged Workforce- The Impact of Authentic Leadership, Transparent Organizational Communication, and Work-Life Enrichment. | (Jiang & Men, 2015) | 1 | 0 | 1 | 1 | 1 | 1 | 5/6*100 | 83.3% | Good |
| Does supervisor-perceived authentic leadership influence employee work engagement through employee-perceived authentic leadership and employee trust? | (Hsieh & Wang, 2015) | 1 | 0 | 1 | 1 | 1 | 1 | 5/6*100 | 83.3% | Good |
| Authentic leadership employees' job satisfaction, and work engagement: a hierarchical linear modelling approach. | (Penger & Cerne, 2014) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.33% | Good |



| | | | | | | | | | | |
|---|-------------------------------------|---|---|---|---|---|---|---------|--------|--------------|
| Multi-Level Modeling Of Principal Authenticity And Teachers' Trust And Engagement | (Wang & Bird, 2011) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.3% | Good |
| Authentic leadership as a source of optimism, trust in the organization and work engagement in the public health care sector | (Stander et al., 2015) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| The impact of intrinsic Motivation on the Effectiveness of Leadership Style towards on Work Engagement | (Shu, 2015) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Enhancing work outcomes of employees with autism spectrum disorder through leadership: Leadership for employees with autism spectrum disorder | (Parr & Hunter, 2014) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| The influence of authentic leadership and areas of worklife on work engagement of registered nurses | (Bamford, Wong, & Laschinger, 2013) | 1 | 0 | 1 | 0 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Authentic leadership, trust, employees' work engagement: A comparative study of Islamic and Conventional | (Ahamed, Hassan, & Hashim, 2013) | 0 | 0 | 1 | 0 | 1 | 1 | 3/6*100 | 50% | Satisfactory |



banks in Malaysia

| | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---------|--------|--------------|
| The effect of Authentic leadership on employee trust and employee engagement | (Wang & Hsieh, 2013) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Authentic Leadership & Work Engagement | (Alok & Israel, 2012) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Authentic leadership, trust and work engagement | (Hassan & Ahmed, 2011) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Authentic leadership of preceptors: predictor of new graduate nurses' work engagement and job satisfaction | (Giallonardo, Wong, & Iwasiw, 2010) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Authentic leadership and nurses' voice behaviour and perceptions of care quality | (Wong, Spence Laschinger, & Cummings, 2010) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Psychological processes linking Authentic leadership to follower behaviours | (Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.3% | Retracted |
| Leadership and Employee Engagement: Proposing Research Agendas Through a Review of Literature. | (Carasco-Saul, Kim, & Kim, 2015) | 0 | 0 | 0 | 0 | 1 | 1 | 2/6*100 | 33.33% | Bad |



| | | | | | | | | | | |
|---|-------------------------|---|---|---|---|---|---|---------|--------|-----|
| The Relationships among Authentic Leadership, Teachers' Work Engagement, Academic Optimism and School Size as Moderator: A Conceptual Model | (Kulophas et al., 2015) | 0 | 0 | 0 | 0 | 1 | 1 | 2/6*100 | 33.33% | Bad |
| Can you see the real me?" A self-based model of authentic leader and follower development | (Gardner et al., 2005) | 0 | 0 | 0 | 0 | 1 | 1 | 2/6*100 | 33.33% | Bad |



2.3.9.7 Data extraction

An adapted version of the data extraction tool by (Roman & Frantz, 2013) was utilized for the purpose of the review. The data that was gathered from the extraction tool included: the author(s) name(s), country/geographical location, study design, participant demographic details, measures used, data on the association that was found and the findings.



UNIVERSITY *of the*
WESTERN CAPE

TABLE 2.3

Data Extraction Tool: AL & WE

| S/N | Authors | Country/ Geographical Allocation/ Sector/ Participants | Study Design | Instruments used | Sample Size/ Participants | Relationship between Authentic Leadership and Work Engagement and other constructs |
|-----|------------------------|--|---|--|---|--|
| 1. | (Hsieh & Wang, 2015) | Taiwan 160 of Taiwan's best performing companies out of 1000 - 100 manufacturing companies and 60 service companies | Random sampling | <p>Authentic leadership was rated with Walumbwa et al. (2008) 16-item scale. It was used to measure separately supervisor-perceived authentic leadership and employee-perceived authentic leadership.</p> <p>Employee trust was assessed by McAllister (1995) 11-item scale.</p> <p>Employee work engagement was assessed with (UWES) developed by Schaufeli et al. (2002).</p> <p>Control variables Gender, age (Sonnetag, 2003; Walumbwa et al., 2010), and tenure (Sonnetag, 2003). Position level was also included.</p> | <p>A total of 48 firms' managers (25 manufacturing firms and 23 service firms agreed to support this study.</p> <p>Supervisors – Service industries = 51.9% Manufacturing industries = 48.1% Male = 70.1% Female = 29.9% Age 40-49 years = 36.4% Tenures over 15 years = 24.1%</p> <p>Employees – Service industries = 40.9% Manufacturing industries = 59.1% Male = 44.3% Female = 55.7% Age 30-39 years = 45.5% Tenures below 5 years = 40.3%</p> | <p>Employee trust fully mediated Supervisor-perceived AL and employee WE.</p> <p>Employee-perceived AL fully mediates supervisor-perceived AL and WE.</p> <p>Employee trust partially mediates the relationship between employee-perceived AL and Employee WE.</p> |
| 2. | (Stander et al., 2015) | Gauteng, South Africa. Employees from various functions within 27 public hospitals and clinics. | Cross-Sectional Research design. Convenience Sample | <p>14-item Authentic Leadership Inventory by (Neider & Schriesheim, 2011).</p> <p>Job resources was measured with the questionnaire on experience and assessment of work, the VBBA by (Van Veldhoven <i>et al.</i>, 1997).</p> <p>Optimism was measured with the 3-item PsyCap construct of optimism on the 12-item</p> | <p>633 public health employees.</p> <p>Gender Female = 79.6% Male = 20.4%</p> <p>Average Age = 42.44</p> | <p>Optimism and trust in the organization mediated the relationship between AL and WE.</p> |

| | | | | | | |
|----|---------------------|--|--|---|--|--|
| | | | | <p>PsyCap Questionnaire (PCQ 12; Luthans, Avolio, Avey & Norman, 2007).</p> <p>Trust in the organization was measured through the Workplace Trust Survey (WTS; Ferres & Travaglione, 2003). The WTS comprises of nine items.</p> <p>Work engagement was measured through the UWES by Schaufeli <i>et al.</i>, 2002, with eight items.</p> | | |
| 3. | (Shu, 2015) | Taiwan. Various Organizations. Chinese Workers | Snowball sampling method | <p>16-item Authentic Leadership Inventory (ALI) by Neider and Schriesheim (2011).</p> <p>Authoritarian Leadership, developed by Cheng et al. (2000), consists of nine Items.</p> <p>Motivation was assessed with the Work Extrinsic and Intrinsic Motivation Scale (WEIMS) (Tremblay, Blanchard, Taylor, Pelletier, Villeneuve, 2009) with 18 items.</p> <p>The Utrecht Work Engagement Scale (UWES-9) developed by Schaufeli, Bakker, and Salanova (2006) which consisted of nine items as used to measure Work Engagement.</p> <p>Obedience questionnaire was taken from Cheng et al. (2006). The survey consisted of five items.</p> | 350 subordinate-supervisor dyads | <p>AL was positively related to WE.</p> <p>Intrinsic motivation fosters the positive relationship between AL and WE.</p> |
| 4. | (Jiang & Men, 2015) | United States. Different Industrial sectors from a premier global | Stratified and quota random sampling through an online sampling platform - | <p>Authentic leadership was assessed with Neider and Schriesheim's (2011) measure.</p> <p>Nine items from Carlson et al. (2006) were</p> | 391 employees. Females = 205(52.7%) Average Age = 40 | <p>The direct effect of AL on employee engagement was not found but the mediation effects from AL</p> |

| | | | | | |
|---------------------------|---|---|---|---|---|
| | provider of survey services, Survey Sampling International (SSI; http://www.surveysampling.com/). | Survey Sampling International. | used to measure Worklife Enrichment. A measure of 18 items from Rawlins (2009) assessed Organizational Climate of Transparent Communication. For Employee engagement, 11 items adapted from Kang (2014) and Saks (2006) were used consisting of two subscales: Positive Affect and Empowerment. | Average time worked for employers = 8.49 years | to employee engagement via transparent organizational communication and work-life enrichment were strong and significant. |
| 5. (Penger & Cerne, 2014) | Slovenia. Manufacturing and processing company. Manufactures composite materials | Multi-level model of cross level interactions | 33, 5-point Likert scale variables were used. Authentic leadership with ALQ by Bruce Avolio, William Gardner, and Fred Walumbwa. Job satisfaction using four items taken from the Hackman and Oldham (1980) job diagnostic scale. Perceived Supervisor Support with Perceived Organizational Support scale (Eisenberger et al., 1986). Work engagement using the 12-item Gallup Workplace Audit scale. | Respondents Leaders = 23 Team members = 289 Leaders Male = 64.9% Female = 35.1% Team members Male = 72.2% Female = 28.8% Leaders Age below 45 = 79.4% Age above 45 = 20.6% Team members Age below 45 = 68.9% Age above 45 = 31.1% | Perceived Supervisor support partially mediated the relationship between AL and WE |
| 6. (Parr & Hunter, 2014) | United States. 80% of the sample came from a National Internet-based, voluntary autism disorder register. | Not stated | The 4 dimensions of Authentic leadership by Avolio et al., 2009 and the 4 dimensions of Transformational leadership were individually used for assessment. These 4 ratings were then added together to form a score for AL and TL. | 54 employees with autism spectrum disorder Gender Female = 53.7% Male = 46.3% | AL added incrementally to the variance across a range of outcomes including WE. |

Other participants were affiliated with other local or national autism advocacy agencies or support groups. All participants have a paid position and 75% work on fulltime basis

3-Item Job satisfaction scale from the Michigan Organizational Assessment Questionnaire satisfaction subscale by Cammann et al., 1979.

Organizational commitment was assessed with the 8-Item Affective Commitment Scale by Allen & Meyer, 1990.

Short 6-Item UWES by Schaufeli et al., 2006.

3-Item Intention to Turnover by Michigan Organizational Assessment Questionnaire by Cammann et al., 1979.

Leader liking was measured with Member Liking of the Leader scale by Wayne & Ferris, 1990.

Anxiety was assessed with 5 Items from the Generalized Anxiety Disorder-7 (GAD-7) by Spitzer et al., 2006.

Authentic leadership with ALQ by (Avolio et al. 2007).

Overall person-job match with Areas of Worklife Scale (AWS) by (Leiter & Maslach 2002).

Work engagement with Utrecht Work Engagement Scale (UWES) short version (Schaufeli & Bakker 2003).

280 received out of 600 questionnaires for nurses.

Sex
Female = 93.5%
Male = 6.5%

Mean Age = 43.4 years

Mean nursing years = 18.9

Mean years in current organization = 13.4

The Overall person-job match in the six areas of work-life fully mediated the relationship between AL and WE

7. (Bamford, Wong, & Laschinger, 2013)
Canada.
Registered nurses employed in a direct-care nursing position. Selected nurses working in acute care hospitals in Ontario, from the College of Nurses (CNO) registry.
Non-experimental Predictive Survey/ Random sample. Secondary study

| | | | | | | |
|----|----------------------------------|---|---------------------------|---|--|--|
| | | | | | Mean years in current unit = 8.6 | |
| 8. | (Ahamed, Hassan, & Hashim, 2013) | Malaysia. Islamic and Conventional Banks. Bank employees | Purposive random sampling | <p>Authentic Leadership Questionnaire (ALQ) by Avolio et al., 2007.</p> <p>Interpersonal Trust (IPTS) and Institutional Trust Scales (ITS) by Mayer & Davis, 1999, McKnight, Choudhury & Kacmar, 2002.</p> <p>Utrecht's Work Engagement Scale (UWES) by Schaufeli & Bakker, 2004.</p> | <p>395 received out of 800 survey questionnaires.</p> <p>Islamic Banks = 189 Conventional Banks = 206</p> <p>Islamic Male = 41% Female = 59%</p> <p>Conventional Male = 49% Female = 51%</p> <p>Islamic Below 15 years in Organization = 91% Above 15 years in Organization = 9%</p> <p>Conventional Below 15 years in Organization = 72% Above 15 years in Organization = 28%</p> | <p>Islamic bank managers were rated as more authentic than the Conventional bank managers. Islamic bank employees were rated as being more engaged in their work.</p> |
| 9. | (Wang & Hsieh, 2013) | Taiwan. Employees in the top 1,000 manufacturing companies and the top 500 service companies. | Not stated | <p>Authentic leadership using the 16-item scale developed by Walumbwa et al. (2008)</p> <p>11-item Employee Trust scale by McAllister's (1995)</p> <p>Employee trust and Employee engagement using the adopted 17-item scale (UWES) of Schaufeli et al. (2002)</p> | <p>386 received from 915 questionnaires distributed.</p> <p>Participants (industries) Service = 60.9% Manufacturing = 39.1%</p> <p>Gender Male = 56.5% Female = 43.5%</p> | <p>Supervisors' AL is positively related to WE, though one of the AL's dimensions.</p> <p>Supervisors' consistency between words actions as well as their moral perceptions has the strongest influence.</p> |



| | | | | | | |
|-----|-----------------------|---|--|--|---|---|
| | | | | | Age Below 24 = 6.0% Between 25-29 = 30.8% Between 30-34 = 24.4% Between 35-39 = 20.7% Between 40-44 = 7.3% Above 45 = 10.9% | Employee trust had a partial mediating effect between AL and WE. |
| 10. | (Alok & Israel, 2012) | India. Working professionals from different Organizations through Google Docs. | Correlational Research Design Cross- Sectional Data | Authentic leadership through ALQ, 16-item by Walumbwa et al. 2008. Promotive and Preventive PO-Org was measured by 16-item Psychological Ownership Questionnaire by Avey et al. 2009. Work engagement by the 9-item Utrecht Work Engagement | 117 working professionals responded Gender Males = 82 Females = 35 Average Age = 31.17years Average tenure (years) with current organization = 4.3 Average reporting time (years) with current supervisor = 2.29 | AL indirectly relates to WE through the full mediation of organization based promotive psychological ownership. |
| 11. | (Wang & Bird, 2011) | United States. 3 County schools. Principals and Teachers | Not Stated | Authentic leadership through ALQ, 16-item by Walumbwa et al. 2008. Workplace trust survey was measured with a 32-item survey by Ferris and Travaglione 2003. Employee engagement was measured by Gallup organization's Q12 (12 items) survey drawn up by Buckingham and Coffman, 1999. | 83 principals and 1240 teachers from 83 public schools in three county schools were contacted. 60 principals and 917 teachers were finally used to reduce bias. Principals - Gender Females = 36 (60%) Males = 24 (40%) Teachers - Ethnicity Caucasian = 54 (90%) African American = 6 (10%) | Teacher perception of principal's authenticity levels was highly related to their trust and engagement levels between and within schools. |



Mean teaching experience = 13.10
(3-33years)

Mean years in administration =
10.86 (3-30years)

Mean years working as principal in
current school = 3.97 (0-25years)

Teachers - Gender
Females = 798 (87%)
Males = 119 (13%)

Teachers - Ethnicity
Caucasian = 825 (90%)
African American = 55 (6%)
Hispanic = 18 (2%)
Others = 18 (2%)

Mean Teachers' teaching experience
= 13.36 (1-42years)

Mean years working in current
school = 6.16 (1-32years)

Mean years working under current
principal = 3.08 (1-17years)

| | | | | | |
|----------------------------|--|---------------------------|---|--|--|
| 12. (Hassan & Ahmed, 2011) | Malaysia. 7 Local Banks and their branches. Bank employees | Purposive random sampling | Authentic Leadership Questionnaire (ALQ) by Avolio et al., 2007. | 395 received out of 800 survey questionnaires. | AL promoted subordinates trust in the leader and contributed to WE Interpersonal trust mediated AL and WE |
| | | | Interpersonal Trust (IPTS) and Institutional Trust Scales (ITS) by Mayer & Davis, 1999, McKnight, Choudhury & Kacmar, 2002. | Gender Female = 216 Male = 179 | |
| | | | Utrecht's Work Engagement Scale (UWES) by Schaufeli & Bakker, 2004. | Below 35 years = 59% 35 – 51 years = 41% | |

| | | | | | | |
|-----|---|---|--|--|--|--|
| 13. | (Giallonardo, Wong, & Iwasiw, 2010) | Canada. Registered Nurses with <3years experience working in acute care setting. | Non-experimental Predictive random Survey | <p>Authentic Leadership Questionnaire (ALQ) by Avolio et al., 2007.</p> <p>Utrecht's Work Engagement Scale (UWES) by Schaufeli & Bakker 2003.</p> <p>Job satisfaction was measured using Part B of the Index of Work Satisfaction scale (IWS) (Stamps 1997).</p> | <p>170 received of 500 questionnaires.</p> <p>Gender Female = 91.8% Male = 8.2%</p> <p>Mean Age = 27.81years</p> <p>Mean months of experience in work setting = 21.83</p> <p>Mean years since graduation = 2.45</p> | <p>New graduate nurses' perceptions of preceptor (mentors) AL were positively related to their perceptions of WE. WE partially mediated the relationship between AL and job satisfaction.</p> <p>Of the AL dimensions, internalized moral perspective had the highest correlation with WE.</p> |
| 14. | (Wong, Spence Laschinger, & Cummings, 2010) | Canada. Employed Registered nurses in staff direct care positions. | Non-experimental Predictive Survey | <p>Authentic leadership with ALQ by (Avolio et al. 2007).</p> <p>Work engagement with Utrecht Work Engagement Scale (UWES) short version (Schaufeli & Bakker 2003).</p> <p>Personal identification with the leader was measured using a scale developed by Kark (2001), similar scale was used to measure social identification with the work unit by Kark et al. (2003)</p> <p>Trust in Management Scale (Mayer & Gavin 2005)</p> <p>Voice behaviour - voice subscale of the Helping and Voice Behaviours Scale (VanDyne & LePine 1998).</p> <p>Perceptions of unit care quality by One item from the International Survey of Hospital Staffing and Organization of Patient Outcomes (Aiken et al. 2001).</p> | <p>280 received of 500 distributed questionnaires.</p> <p>Gender Female = 93.5% Male = 6.5%</p> <p>Mean Age = 43.41years</p> <p>Mean nursing years = 18.9</p> <p>Mean years in current organization = 13.4</p> <p>Mean years in current unit = 8.6</p> | <p>AL significantly and positively influenced staff nurses' trust in their manager and WE.</p> <p>An indirect effect of AL on WE through personal and social identification.</p> |

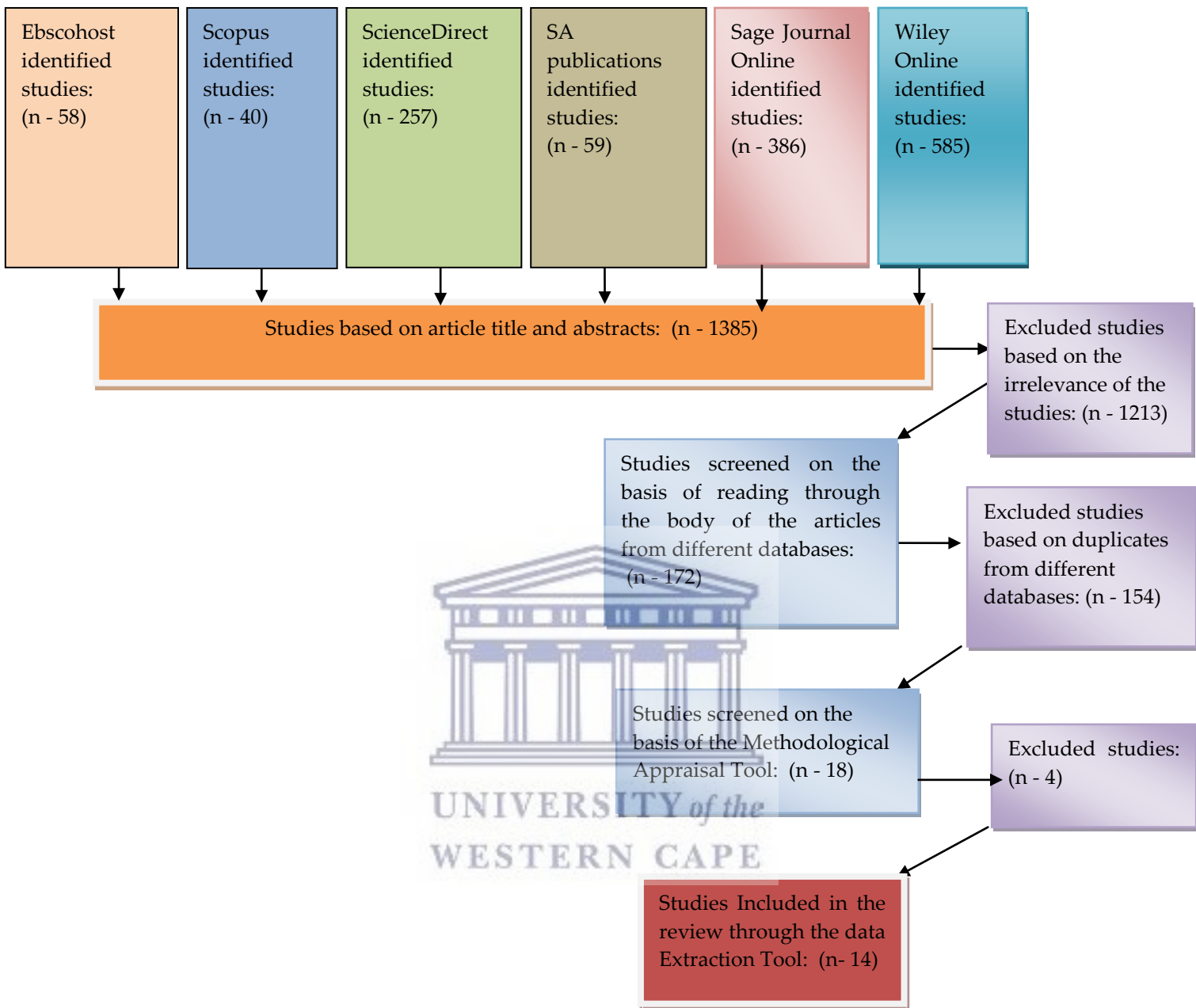


Figure 2.1 : Flow chart for screening of studies: Authentic leadership and work engagement

2.3.10 Results

Figure 2.1 summarizes the results that were obtained for the different studies that were finally included in the review. The Methodological Appraisal Instrument was used to produce the final inclusion criteria and studies. Fourteen studies finally resulted from the use of the methodological appraisal section of the review. The criteria that were used in the methodological quality assessment instrument included the sampling method used, response rate, measuring tools, sources of data used, whether authentic leadership was looked at in the study and whether the relationship between authentic leadership and work engagement was discussed. Of the 18 articles that formed part of the methodological appraisal, four reached the desired outcome in the 'good' category in the 67 – 100% range, whilst 10 reached the 'satisfactory' category in the 34 – 66% range. Four articles were excluded from the review because three fell into the 'bad' category whilst one study was retracted by the publishers. Therefore, only 14 studies scaled through and were included in the final review. Therefore, of the 1 385 articles obtained from the search engines, only 14 articles met with the reviewers' inclusion criteria. These 14 studies were further and extensively reviewed in Table 2.3 - the Data Extraction Tool.

2.3.10.1 Overview of reviewed studies

Several designs were used for the 14 studies that were reviewed. Three were non-experimental, predictive survey designs, four of the 14 used purposive random sampling techniques, one other used a stratified and quota random sampling method, two utilized the cross sectional correlational research designs, whilst one of the studies used the snowballing sampling method. The outstanding four studies did not specify which study designs were used, though one out of the four indicated that it employed a multilevel model cross level interaction for its study.

Of the 14 studies, three were conducted in the United States of America (Jiang & Men, 2015; Parr & Hunter, 2014; Wang & Bird, 2011), three in Canada (Bamford et al., 2013; Giallonardo et al., 2010; Wong et al., 2010), three in Taiwan (Hsieh & Wang, 2015; Shu, 2015; Wang & Hsieh, 2013), two in Malaysia (Ahamed et al., 2013; Hassan & Ahmed, 2011), whilst one of the studies (Penger & Cerne, 2014) was conducted in Slovenia (Europe), one in South Africa (Stander et al., 2015) and another one in India (Alok & Israel, 2012). The participants used for the study ranged between manufacturing companies (Penger & Cerne, 2014), to registered nurses (Bamford et al., 2013; Giallonardo et al., 2010; Wong et al., 2010), employees from 27 public hospitals (Stander et al., 2015), service companies, bank employees – Islamic, conventional, and local banks (Ahamed et al., 2013; Hassan & Ahmed, 2011) and schools - principals and teachers (Wang & Bird, 2011). One of the studies obtained most of its sample from a National Internet-based survey (Parr & Hunter, 2014) whilst other studies used different organizations (Hsieh & Wang, 2015; Shu, 2015; Wang & Hsieh, 2013) and Google documents (Alok & Israel, 2012) and a Survey Sampling International (Jiang & Men, 2015) as sample sites.



2.3.10.2 Conceptualizations

Authentic Leadership

The 14 articles in the review conceptualized authentic leadership based on definitions and model purported by (Avolio, Gardner, & Walumbwa, 2007; Avolio & Gardner, 2005; Avolio et al., 2004; Avolio, Walumbwa, & Weber, 2009; Fields, 2007; Gardner et al., 2005; Luthans & Avolio, 2003; Walumbwa et al., 2008). Authentic leadership includes behaviours such as self-awareness, relational transparency, internalized moral perspective and balanced information processing.

Work Engagement

Most of the studies considered employee work engagement on the theoretical framework of (Kahn, 1990). With particular emphasis, 11 of the articles with the exemption of three studies, conceptualized WE with the definitions of (Schaufeli & Bakker, 2003; Schaufeli, Bakker, & Salanova, 2006; Schaufeli et al., 2002) as an antithesis of burnout. It was visualized as comprising of three dimensions: vigour, absorption and dedication. One of the studies was considered using the definition of Ostrem and Wheeler as comprising of employees' commitment and the positive emotions that they experience (Wang & Bird, 2011). Another study conceptualized work engagement with Robinson et al.'s - IES (Institute of Employment Studies) definition as "a positive attitude held by the employee towards the organization and its values". This comprises of two themes namely: "(a) employees' physical, cognitive and emotional presence when occupying and performing an organizational role, and (b) a highly persistent affective-cognitive state characterized by attention, absorption, vigour, dedication and empowerment" (Robinson, Perryman, & Hayday, 2004, p. 9) whilst the last study believed that WE as stipulated by Saks (2006) is task performance related and also an exchange for benefits received from ones's workplace.

2.3.10.3 Measures of Assessment

Authentic Leadership

Out of the 14 articles selected for review, seven articles considered authentic leadership using the 16 item-four dimensional measure by Avolio et al. (2007); Avolio et al. (2009), four used the 16 item-four dimensional scale by Walumbwa et al. (2008), three used the four dimensional measuring instrument by Neider and Schriesheim (2011) with one of the three using a 14 item scale and the other two using the 16 item scale. Despite the different scales used, the 14 articles was still

based on the authentic leadership dimensions utilizing the typology postulated by (Avolio et al., 2007; Walumbwa et al., 2008).

Work Engagement

Out of the 14 articles, two articles used the measuring dimensions (UWES-9) by (Schaufeli et al., 2006), another used a 6-item scale from the short version UWES-9 by (Schaufeli et al., 2006), three of the articles utilized the UWES by Schaufeli and Bakker (2003) with one of the studies using the UWES-17 whilst the other two used the shorter version UWES-9. Two studies used the 17-item version of the UWES by (Schaufeli et al., 2002) based on three subscales: vigour (6 items), dedication (5 items) and absorption (6 items), one used an 8-item UWES version by (Schaufeli et al., 2002) and two articles used the (UWES-9) by Schaufeli and Bakker (2004).

Work Engagement was also measured using the 12-item Gallup Workplace Audit scale (GWA: The Gallup Organization, 1992-1999), one of the articles used an 11-item scale adapted from Kang (2014) and Saks (2006) which consisted of two subscales: Positive Affect and Empowerment whilst another article used the Buckingham and Coffman (1999), 12-item employee engagement measurement pooled out of thousands of focus group discussions and interview sessions.

2.3.11 Discussion

This systematic review was undertaken to examine the relationships between authentic leadership (AL) and work engagement (WE). The review focused on studies conducted on all available published studies between 1990 and 2015 on the relationships that exist between these two named constructs.

Most of the studies reviewed were conducted abroad with only one study conducted in Africa. This signifies that these relationships have either been under-studied

within the African sample or the studies conducted on these constructs are not being published. It is essential to look more into this so that it would be clear whether the African sample with its heterogeneous population have been effectively researched upon.

All the studies demonstrated a direct or indirect relationship between authentic leadership and work engagement. The relationships portrayed between authentic leadership and work engagement confirmed that the presence of authentic leadership behaviours would indeed foster and increase in employee or work engagement. However, most studies indicated that there is a need for a mediating element or construct apart from authentic leadership. Trust emerged a few times as a key factor in facilitating the relationship between AL and WE.

Relationships between authentic leadership and work engagement were found to be partially mediated by perceived supervisor support (Penger & Cerne, 2014), fully mediated by the overall person-job match in six areas of work life (Bamford et al., 2013) and mediated by Optimism and trust in the organization (Stander et al., 2015). Authentic leadership contributed to work engagement with interpersonal trust mediating the relationship between authentic leadership and work engagement (Hassan & Ahmed, 2011), an indirect effect of authentic leadership on work engagement through personal and social identification (Wong et al., 2010), employee trust and employee-perceived authentic leadership fully mediating supervisor authentic leadership and employee work engagement with employee trust partially mediating the relationship between employee-perceived authentic leadership and employee work engagement (Hsieh & Wang, 2015). Intrinsic motivation fosters the positive relationship between authentic leadership and work engagement (Shu, 2015); authentic leadership indirectly relates to work engagement through the full mediation of organization based promotive psychological ownership whilst

preventive psychological ownership negatively associated with authentic leadership and work engagement (Alok & Israel, 2012).

New graduate nurses' perceptions of preceptor authentic leadership were found to be positively related to their perceptions of work engagement with work engagement partially mediating the relationship between authentic relationship and job satisfaction. However, it was observed that of all the authentic leadership dimensions, internalized moral perspective had the highest correlation with work engagement (Giallonardo et al., 2010). Supervisors' authentic leadership was positively related to work engagement, though one of the authentic leadership's dimensions – (supervisors' consistency between words actions as well as their moral perceptions) had the strongest influence on work engagement. It was found that employee trust had a partial mediating effect on the relationship between authentic leadership and work engagement (Wang & Hsieh, 2013). One of the studies observed that, compared to managers in Conventional banks, managers from Islamic banks were rated as more authentic, hence employees were more engaged in their work (Ahamed et al., 2013).



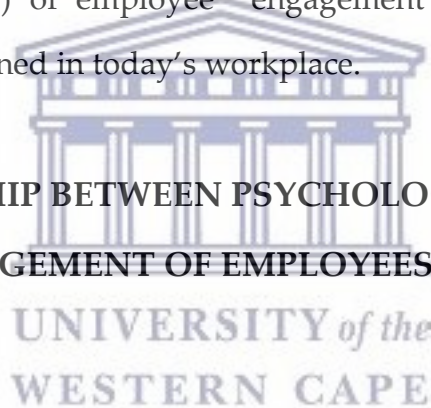
Teacher perceptions of principals' authenticity levels were highly related to their trust and engagement levels between and within schools (Wang & Bird, 2011). Parr and Hunter (2014) also noted that although authentic leadership incrementally added to the variance across a range of outcomes which included work engagement, not one leadership style was superior to the other i.e. comparing authentic leadership with transformational leadership. Essentially, the authors proposed that both forms of leadership styles would make the same positive impact on employees. Jiang and Men (2015) did not find any direct effect or influence of authentic leadership on employee engagement but found that the mediation effects on the relationship between authentic leadership and employee engagement via

transparent organizational communication and work-life enrichment were strong and significant.

2.3.12 Conclusion

Conclusively, this systematic review has assisted in buttressing that indeed authentic leadership would promote and sustain employee engagement in today's organizations (Kulophas et al., 2015; Parr & Hunter, 2014; Shamir & Eilam, 2005; Tims et al., 2011; Yukl, 2008), however, this review further sheds light and emphasizes that authentic leadership alone may not be sufficient to achieve the goal. It is therefore of utmost importance especially in the African context that other drivers (Alok & Israel, 2012; Luthans et al., 2007; Schaufeli & Bakker, 2004; Xanthopoulou et al., 2009) of employee engagement be put in place if work engagement must be sustained in today's workplace.

2.4 THE RELATIONSHIP BETWEEN PSYCHOLOGICAL CAPITAL AND THE WORK ENGAGEMENT OF EMPLOYEES: A SYSTEMATIC REVIEW



2.4.1 Introduction

Psychological Capital (PsyCap) has been described as one of the crucial, fundamental constructs in the sphere of Positive Organizational Behaviour (POB) as it can be perceived as a key factor for improving and developing significant skills and attributes needful for high performance at the workplace (Mohanty & Kolhe, 2016).

In 2004, Luthans conceptualized the PsyCap construct with its "HERO" dimensions which has been theoretically and empirically validated by several authors (Luthans et al., 2007; Luthans et al., 2004; Luthans & Youssef, 2004). Luthans sums up the

impact of PsyCap on an individual and organizational performance as - who a person is and can be as beyond and against “who you know” – social capital, “what you have” – financial capital and “what you know” – human capital (Luthans et al., 2004). The joint interaction of the four HERO dimensions and its coexistence as a positive psychological nature of an individual is what indicates PsyCap as a higher-order construct (Luthans et al., 2007).

2.4.2 Delineation of Psychological Capital (PsyCap)

The narrative of the Psychological Capital construct can be traced back to positive psychology which originated from the research of Martin Seligman. Dr. Seligman, whose initial contribution of positive psychology emanated from what he learnt from his daughter’s words and actions, concluded that when the good in people is nurtured and strengthened, it brings about a positive outcome. Instead of the focus being placed on the weaknesses and chaos in people’s lives, emphasis should rather be placed on the positives and strengths that individuals possess and display (Seligman, 1999; Seligman & Csikszentmihalyi, 2000). Seligman emphasized that possessing, acknowledging and developing these innate positive qualities make life and relationships more constructive and beneficial (Levene, 2015). In their article, Gable and Haidt (2005) defined positive psychology as “the study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and institutions” (p. 104). It is in this light that Psychological Capital, a higher-order psychological construct, was brought to the spotlight by Luthans who explained that PsyCap is a positive organizational behaviour which is deeply rooted in positive psychology (Levene, 2015; Luthans, 2002). Luthans stated that positive organizational behaviour (POB) seeks to identify psychological capacities that are unique to an individual and state-like in nature which can be measured, developed and if effectively managed would lead to organizational performance (Luthans,

2002). Hope, resilience and confidence which are sub-constructs of Psychological Capital have been found to meet the POB inclusion criteria.

2.4.3 Inconsistencies, Contentions and Disputations regarding Psychological Capital

As it is applicable to many of constructs that have been defined and conceptualized, criticisms have been levied against the PsyCap theoretical and conceptual definitions. For instance, since PsyCap has been termed a positive psychological state that is highly beneficial to increased performance in an organization, therefore, would a very high level of PsyCap still produce the expected result or could it lead to a downward trend in the optimal functioning of the individual (Youssef & Luthans, 2011). Is it possible for an individual to be too positively minded such that it subsequently becomes detrimental to the organization? It is therefore imperative for PsyCap researchers to investigate these concern (Du Plessis, 2014).

Although a number of studies that have been carried out in the workplace have confirmed the 4-factor structure and construct validity of the PCQ (Du Plessis, 2014; Görgens-Ekermans & Herbert, 2013; Luthans, Norman, Avolio, & Avey, 2008; Simons & Buitendach, 2013), Little, Gooty and Nelson (2007) have raised criticisms around the lack of construct validity of the PCQ. These authors are of the opinion that distinct, clear-cut dimensions of hope and optimism in the workplace have not been found and therefore should not be utilized as separate PCQ constructs (Du Plessis, 2014).

Dawkins, Martin, Scott, and Sanderson (2013) cautioned that adequate care should be observed when studying and developing the PsyCap construct so that a “blanket approach” is not initiated. If proper, careful, systematically, verifiable inclusions into the PsyCap dimension are not put in place; it may lead to a “caricature” of what the

PsyCap construct truly represents. The authors noted this as a response to Luthans et al., (2007) who suggested that PsyCap as a positive psychological dimension should include more unique, measurable and state-like constructs that can be developed such as wisdom, creativity, flow, well-being, humour, gratitude, emotional intelligence, forgiveness, and even some higher-order states like spirituality and authenticity (Du Plessis, 2014).

2.4.4 Conceptualizing Psychological Capital (PsyCap)

PsyCap has been conceptually and empirically proven to be a core construct of POB (Luthans et al., 2007a; Luthans et al., 2007b) in which four states or dimensions were identified and included in the PsyCap construct. Although, each of these four dimensions have the merit and potentials to stand alone, their joint ability and simultaneous existence in an individual provide a far-reaching effect and potential for increased organizational performance.

This study therefore conceptualizes PsyCap based on the four-component model of Luthans et al., as “an individual’s positive psychological state of development and is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success” (2007, p. 3). PsyCap has been conceptualized with the HERO behaviours such as:

Efficacy – Using the extensive social cognitive theory of Bandura (1997) as a basis, Self-efficacy is defined as “an individual’s conviction (or confidence) about his or her abilities to mobilize the motivation, cognitive resources, and courses of action

needed to successfully execute a specific task within a given context” (Stajkovic & Luthans, 1998a). This implies that an individual has confidence in his/her ability to complete a certain task. This necessarily does not mean this confidence is associated with all tasks. Luthans et al., (2007) refer to this state as being – area specific, however, it also means that the individual can develop self-efficacy in other dimensions or on entirely new tasks. When people are confident in their skills and abilities, they are likely to persevere and persist in achieving their goals tasks and will devote more energy and time to see engaging tasks completed (Stajkovic & Luthans, 1998a).

Luthans et al., (2007) expatiates that an individual’s efficacy can be developed on their collective efficacy and strengths instead of one’s own individual abilities. This state of mind will be highly beneficial if applied to the workplace environment.

Based on Stajkovic and Luthans (1998), Self-Efficacy can be seen in three dimensions which are highly crucial for performance: (1) Magnitude of efficacious expectations – This is described as the perceived capability of an individual in executing a particular level of task difficulty; (2) Strength of efficacious expectations – This refers to how strong or weak the individual’s judgment is regarding the magnitude of the task. A strong judgment by the individual will possibly produce more determination, devotion, and doggedness despite challenging experiences; and (3) Generality of efficacious expectations – This dimension is based on previous experiences or beliefs. Confidence on a given task can be influenced by how best the individual was able to achieve the same given tasks in previous circumstances.

TABLE 2.4

Dimensions of Self-efficacy

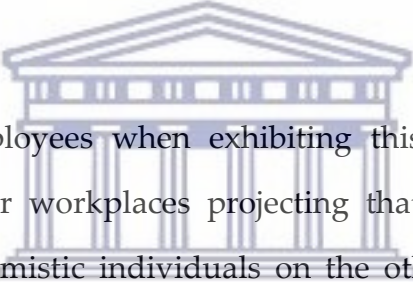
| Magnitude | Strength | Generality |
|--|--|---|
| What level of task difficulty and complexity (low, moderate, high) an employee believes he or she can accomplish. Levels of task difficulty and complexity represent different degrees of challenge for successful task performance. | How certain an employee is about performing at the level of task difficulty and complexity indicated by magnitude of self-efficacy? The higher the strength of self-efficacy, the higher the likelihood of successful performance. | Personal efficaciousness is generalized across the similar activity domains. They can vary on modalities in which ability is expressed (behavioural, cognitive), characteristics of the situations, or people receiving the behaviours. |

Sources. Stajkovic, A. D., & Luthans, F. (1998b). Self-Efficacy and Work-Related Performance: A Meta-Analysis. *Psychological Bulletin*, 124(2), 240-261.

In the same vein, Bandura explains that self-efficacy is influenced by four sources which includes (1) Performance mastery, (2) Vicarious experiences, (3) Social persuasion, and (4) Physical and emotional states. Performance mastery refers to previous experiences – either failures or successes achieved in given tasks as these experiences will probably influence the decision by the individual as to whether to embark on such tasks or not. Vicarious experiences are based on how an individual observes his/her abilities to carry out certain tasks in relation to other significant people he/she associates with. Social persuasion refers to an individual’s confidence that is hinged on the positive or negative reinforcement that is received from others whilst physical and emotional states are the individual perceptions of people about their strengths, abilities, failures and vulnerabilities.

Optimism – Optimism, though an everyday word which depicts positive or desirable events, does not sufficiently define the word in the context of the PsyCap optimism. Seligman asserts that the PsyCap Optimism is “explanatory” or “attributional” in nature. This style depicts the manner in which individuals explain

life's events or situations. They make futuristic conclusions based on their interpretations of their successes or setbacks. An optimist assigns positive situations to being permanent, long-lasting common and stable or personal (i.e. work ethics) whilst negative events are termed to be short-lived, external, and case-specific or situation-specific (i.e. Missed deadlines). Contrarily, a pessimist would interpret positive events as short-lived, external and case-specific whilst negative events would be observed as permanent, long-lasting common and personal (Mohanty & Kolhe, 2016). In essence, individuals that are optimistic in nature would desire to be applauded for the positive happenings in their life because they perceive that such events were within their control and should be long-lasting. On the contrary however, such individuals attribute negative events as out of their control (Luthans et al., 2007).

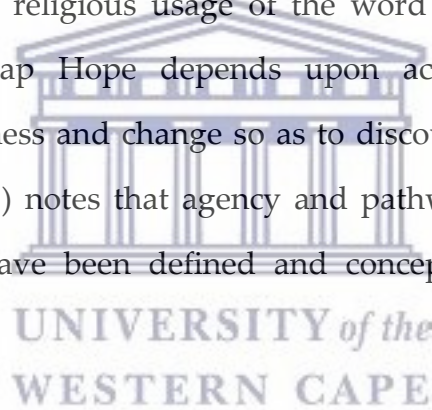


Optimistic persons or employees when exhibiting this kind of attitude remain positively confident at their workplaces projecting that good things will always happen in the future. Pessimistic individuals on the other hand do not view life events as such. They interpret positive events as them being lucky or that happened by chance, temporary in nature and is unlikely to reoccur in future. As such, pessimists do not give credit to themselves for their efforts or skills when they have good and positive outcomes. Furthermore, they choose to assign blame to themselves at the event of negative outcomes and assume that negative things will keep happening in their lives. This divergent explanatory lifestyle of an optimist and a pessimist as alluded by Peterson and Steen is primarily because the person's assessment of their own "response-outcome independence" (Mohanty & Kolhe, 2016). An individual is motivated to act, persevere, or work out a situation when the person perceives that the situation is under his or her own control, however, if the event is perceived as out of one's own control, then opportunities to act or fight for such cause is allowed to slip.

Seligman; Luthans and Avolio have emphasized that the PsyCap Optimism is state-like and developmental in nature although some other authors have seen it as a continuum of a “dispositional personality trait which is exhibited in a general tendency to expect more favourable outcomes” (Du Plessis, 2014). Schneider (2001) agrees that the PsyCap optimism can be developed in the workplace when perspectives of prior events are changed and reassessed and ongoing realities are acknowledged. Focusing and appreciating the positive events of the present and looking forward to the future with great expectations of manifold opportunities it can bring would also assist to build the PsyCap Optimism at the workplace. Optimism has been seen to be positively related to several desirable outcomes like workplace performance, wellbeing, education, health. Sports and politics (Luthans et al., 2006, 2005; Mohanty & Kolhe, 2016; Seligman, 1999, 2002; Youssef & Luthans, 2007). Although these four constructs are highly significant on separate terms, PsyCap has been seen to be synergistic in nature with PsyCap as a whole producing far greater results than its individual sub constructs (Mohanty & Kolhe, 2016). As such, PsyCap has been termed as a higher order (second-order) core construct with the HERO dimensions classified as the first-order dimensions of PsyCap.

Hope – This construct is conceptualized based on the extensive research work of a Clinical psychology professor, Snyder (2000) who defined hope as “a positive motivational state that is based on an interactively derived sense of successful (1) agency (goal-directed energy) and (2) pathways (planning to meet goals)” (Snyder, Irving, & Anderson, 1991, p. 287). Snyder’s significant study supports that Hope although trait-like is a psychological strength that is cognitive and developmental in nature such that individuals are capable of establishing and achieving their set realistic objectives and expectations even at the face of challenges. Individuals thus “aim through a self-directed determination, energy and perception of internalized control” to reach out for their goals through “proactively generating alternative

paths to their desired destinations when the original ones gets blocked” (Mohanty & Kolhe, 2016, p. 489). These attitudes can be referred to as the agency or (willpower) and pathways or (waypower) elements of hope. These hope constituents are particularly pertinent and relevant for boosting performance in today’s organizations. Literature in the academics, physical and mental health, athletics, well-being outcomes and the workplace environment (Luthans & Jensen, 2002; Luthans, 2002; Luthans et al., 2006; Luthans & Youssef, 2004; Peterson & Byron, 2008; Snyder, 2000b, 2002; Youssef & Luthans, 2007) have empirically and conceptually proven that the higher the level of hope exhibited by individuals, the more likely they are to achieve their goals. It has been noted that the pathways components of hope greatly demarcates the PsyCap Hope from the other PsyCap sub-constructs and even the everyday or religious usage of the word (Mohanty & Kolhe, 2016; Snyder, 2002). The PsyCap Hope depends upon active decisions, processes, resourcefulness, inventiveness and change so as to discover and proffer alternative routes. Snyder et al., (1991) notes that agency and pathways influence each other, although both concepts have been defined and conceptualized as separate and distinct in the hope model.



Furthermore, Luthans et al. (2007) suggests that when measureable, specific yet challenging objectives are set, achieving effective goals are attainable thus facilitating agency development. Previous studies; Larson, Norman, Hughes, and Avey (2013); Luthans and Jensen (2002); Peterson and Luthans (2003); Youssef and Luthans (2007) have linked hope with performance, organizational commitment, job satisfaction, business ownership satisfaction and work happiness but Youssef and Luthans (2005) contradicts that stance and demonstrates a negative correlation with performance outcomes. Du Plessis (2014), also states that this negative correlation could be as a result of individuals being denied the ability to devote more time, skill and energy to a work environment than they wish to give.

Resilience – According to Masten and Reed (2002) as well as Masten, Cutuli, Herbers and Reed (2009, p. 118), from a clinical, positive psychological perspective, defined Resilience as “patterns of positive adaptation during or following significant adversity or risk” whilst Luthans, (2002, p. 702) defined the PsyCap resilience as “the positive psychological capacity to rebound, to bounce back from adversity, uncertainty, conflict, failure or even positive change, progress and increased responsibility”. Resilience has been seen as not only reactive in nature but also proactive such that whether negative setbacks or positive challenging events are experienced (Youssef & Luthans, 2007), the ability to recover, learn from the situation and move on is exhibited.

Research has classified Resilience into two segments: (1) adversity, some form of challenging event, threat, or negative stressor and, (2) the response or adaptation to the threat, stressor or change (Luthans et al., 2007; Luthar, Cicchetti, & Becker, 2000; Masten & Reed, 2002; Masten, 2001) which suggests that the ability to effectively utilize the events around and move on despite risks and adversities is what makes an individual resilient in nature. Furthermore, Avey, Reichard, Luthans, and Mhatre, (2011); Luthans et al., (2007); Youssef and Luthans, (2007) have established a positive correlation between resilience and workplace performance outcomes, relationship between resilience and improved performance (Luthans, Avolio, Walumbwa, & Li, 2005; Zamahani, Ghorbani, & Rezaei, 2011) and employee retention especially in high risk professions (Hodges, Keeley, & Grier, 2005). This is so true considering that employees and managers in today’s work contact have realized the need for individuals who can “thrive on chaos, proactively learn and grow through hardships, and excel no matter how many or how intense” Mohanty and Kolhe (2016, p. 491) challenges or setbacks could be. The authors added that in today’s workplace, it is not sufficient for an employee to bounce back to an initial state before an expected turn of event or challenge, but to exceed expectations and

reach a higher point than before. In essence, employees or followers are not only expected to get through and recover from a problem but also to bloom, flourish and progress towards their desired goals and if possible ahead of their counterparts in other competing organizations (Ryff & Singer, 2003). This is a seemingly, enormous but achievable task for today's employee.

Several authors have confirmed that resilience is measurable in nature and can also be developed (Block & Kremen, 1996; Bonanno, 2005; Masten, 2001; Masten et al., 2009).

2.4.5 Work Engagement (WE) and Psychological Capital

“There are only three measurements that tell you nearly everything you need to know about your organization's overall performance: employee engagement, customer satisfaction, and cash flow. It goes without saying that no company, small or large, can win over the long run without energized employees who believe in the mission and understand how to achieve it.” (Welch, 2015) - Former Chief Executive Officer of General Electric.

It is therefore paramount that work engagement (WE) is fostered at the workplace because it depicts the state of the organization and its future.

Bakker et al., (2008) identified WE as a progressively, satisfying and rewarding job-related state of wellness and productivity at work. When employees peruse their work energetically, they are often surprised at how fast the time flies by. Xanthopoulou et al., (2007; 2009) confirmed that when employees are engaged at work, they tend to be more optimistic about life work outcomes.

Literature has proposed the existence of positive correlations between PsyCap, organizational performance, psychological well-being and engagement of employees (Luthans et al., 2007; Luthans, Avey, Avolio, & Peterson, 2010; Peterson, Luthans,

Avolio, Walumbwa, & Zhang, 2011; Simons & Buitendach, 2013; Xanthopoulou et al., 2009). A positive association has been indicated between commitment, resilience, and engagement (Luthans et al., 2007; Youssef & Luthans, 2007). Since resilience is about bouncing back and staying focusing amidst challenging work environment, it is indeed logical to suggest its positive impact on employee engagement. Luthar et al. (2000) indicated that success would likely accrue to organizations if and when resilience is developed in employees.

It has been observed that a significant follower PsyCap will emerge when leaders or managers act as role models for their subordinates by displaying high levels of PsyCap. These associated role modelling between the leader and follower PsyCap has been seen to produce a more positive approach and performance level at the workplace (Avey et al., 2011; Walumbwa, Avolio, et al., 2010).

A positive link between optimism and engagement has also been established (Arakawa & Greenberg, 2007; Simons & Buitendach, 2013). Furthermore, Luthans et al. (2007) suggested that when employees are optimistic, they are likely to positively view and deal with the not-so-good changes that crop up in the organization than pessimistic employees would.

However, on the contrary Hope reported a slow, draggy effect on work engagement over time (Ouweneel et. al., as cited by Mohanty & Kolhe, 2016).

2.4.6 A Systematic review of the relationship between psychological capital and work engagement

To the best of the knowledge of the researcher, there had been no systematic review till date that has been conducted on the relationship between psychological capital and work engagement although several studies have highlighted the association between Psycap and WE. Mohanty and Kolhe (2016) in his study pointed out that it

had been quite a hectic task linking PsyCap to other “organizational intangible resources” like Work engagement, authentic leadership and team work. This review therefore seeks to alleviate this statement and provide a validation for empirical study to follow.

2.4.7 Rationale for the review

Studies have suggested the positive outcomes that result from positive forms of leadership in relation to organizations and employees in particular (Antino et al., 2014; Tims et al., 2011). This review thus sought to bring into emphasis the relationship between psychological capital and work engagement and to understand what kind of relationships exist among these two constructs. Will psychological capital sufficiently impact or foster work engagement in organizations or is psychological capital better facilitated by other mediating factors? What are the other mediating factors that have been suggested by extant literature? Furthermore, De Waal and Pienaar (2013); Karatepe and Karadas (2015) has argued on the scarcity in literature of the effect of the joint dimensions of PsyCap on WE.

2.4.8 Aim of the review

The aim of this review was to systematically review and synthesize as much as is possible, every available published literature regarding psychological capital and work engagement. The review was concerned with establishing an empirical systematic comprehensive report on the said constructs. This review focused on published empirical studies conducted from the year 1990 to 2016.

2.4.9 Review Question

What kind of relationships exists between psychological capital and employee engagement in an organization?

2.4.10 Method

2.4.10.1 Terms

The Keywords that were included within the systematic review were: Psychological Capital, Work engagement, Job engagement, Employee engagement and Engagement.

2.4.10.2 Article Search

The articles indexed in eight electronic databases: EBSCOhost Online Research Databases – (Academic Search Complete, Business Source Complete, and PsycARTICLES), Science Direct, Wiley Online Library, Scopus, SA ePublications, SAGE Journals Online and Google Scholar. These databases from 1st January 1990 to 31st December, 2016 were utilized in searching for articles. The first seven electronic databases were used for the initial, comprehensive search whilst the Google Scholar was used to compliment the searches in order to locate the complete articles that had been identified by the above listed six search databases. Included in these databases were national and international journals such as Journal of Leadership & Organizational Studies, Journal of Advanced Nursing, Social Behaviour & Personality, Journal of Nursing Management, Australian Journal of Management, South African Journal of Psychology, The Leadership Quarterly, Journal of Nursing Administration, Journal of Organizational Behaviour, and Journal of Leadership & Organizational Studies.

2.4.10.3 Inclusion criteria

Included studies were identified and selected on the basis of their titles, abstract, and keywords. Subsequently, these different literatures were included in the review based on their eligibility. The eligibility criteria were:

- **Publication Date** – Only studies published between 1990 and 2016 were considered as eligible. Pilot searches earlier conducted indicated that there

were no studies on Psychological Capital and Work Engagement prior to 1990. Since this review was carried out in 2017, the studies included were capped at 2016.

- **Language** – Only studies published in or translated to the English language were considered. Wilson, Lipsey, and Derzon (2003) observed that this is a commonly used concept for systematic reviews in view of the difficulties that could be encountered in translating and replicating the review.
- **Type of studies** – Only studies that considered the relationship between psychological capital and engagement were considered. Articles that included search terms such as psychological capital, engagement, employee engagement, work engagement, job engagement in their titles, abstracts, or body text were included in the review. As the choice of particular words may influence the results of a review, therefore only synonyms of the included constructs were included to further enrich the literature search. Studies which did not refer to such words or focused only on PsyCap or work engagement in itself were excluded.
- **Publication status** - Only peer-reviewed journal articles were included so as to ensure a high level of quality.
- **Study design** - Only experimental studies were included in the review.

2.4.10.4 Exclusion criteria

Literature that was excluded from the systematic review included:

- Unpublished studies,
- Studies published prior to 1990 and later than 2016,
- Studies that included other factors impacting employee engagement aside from PsyCap and vice-versa,
- Studies carried out singly on PsyCap or work engagement that did not impact on the other construct.

2.4.10.5 Study Selection/ Search and Retrieval Process

This rigorous, extensive search generated 1037 articles. The titles, abstracts, and keywords of these articles were reviewed out of which 881 studies were excluded at this stage because they did not meet the eligibility criteria and only 156 articles indicated their relevance to the topic under study. Some of the studies excluded were because they touched on authentic leadership only or work engagement only or were impacted by other constructs among other things. Other studies excluded at this stage bordered on the fact that they were conceptual studies or reviews also. Out of 156 articles, only 44 articles were meticulously read as the difference of 112 articles were duplicates from the different databases that were used. 32 articles were finally screened and analysed with the adapted version of the Data Extraction Tool and Methodological Quality Appraisal Tool (Roman & Frantz, 2013). Finally, 12 articles were excluded based on the Methodological Quality Appraisal Tool and only 32 articles was used for the review.

2.4.10.6 Methodological quality appraisal

The methodological quality was assessed using the methodological quality appraisal tool adapted from Roman and Frantz (2013). The methodological quality appraisal tool was used to evaluate the sampling methods, response rate, validity and reliability of the measuring tool and also the data source. A possible inclusion within the review is considered when the methodological quality appraisal score is obtained as satisfactory or good.

Table 2.5

Methodological Quality Appraisal Tool: PsyCap & WE

| <i>Articles</i> | <i>Authors</i> | <i>Sampling method: Was it representative of the population intended to the study?</i> | <i>Was a response rate mentioned within the study? (Respond no if response rate is below 60)</i> | <i>Was the measurement tool used valid and reliable?</i> | <i>Was it a primary or secondary data source?</i> | <i>Was PsyCap looked at within the study?</i> | <i>Were the relationship/ association between PsyCap and Work Engagement explored?</i> | <i>Calculation</i> | <i>Total</i> | <i>Comments</i> |
|--|-------------------------------------|--|--|--|---|---|--|--------------------|--------------|-----------------|
| A test of a job demands-resources intervention. | (Wingerden, Bakker, & Derks, 2016) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.33% | Good |
| Enhancing work engagement: The roles of psychological capital, authentic leadership and work empowerment | (Joo, Lim, & Kim, 2016) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.3% | Good |
| A positive approach to management education: The relationship between academic PsyCap and student engagement. | (Luthans, Luthans, & Palmer, 2016) | 0 | 0 | 1 | 1 | 1 | 1 | 5/6*100 | 83.3% | Good |
| Why is hospitality employees' psychological capital important? The effects of psychological capital on work engagement | (Paek, Schuckert, Kim, & Lee, 2015) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.3% | Good |



and employee morale.

| | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---------|--------|------|
| Do psychological capital and work engagement foster frontline employees' satisfaction?: A study in the hotel industry | (Karatepe & Karadas, 2015) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.33% | Good |
| Psychological Capital among University Students: Relationships with Study Engagement and Intrinsic Motivation | (Siu, Bakker, & Jiang, 2014) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.3% | Good |
| Psychological capital: Internal and external validity of the psychological questionnaire (PCQ-24) on a South African sample. | (Görgens-Ekermans & Herbert, 2013) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.33% | Good |
| Psychological Capital: A New Lens for Understanding Employee Fit and Attitudes. | (Larson, Norman, Hughes, & Avey, 2013) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.33% | Good |
| Predictors of new graduate nurses' workplace well-being: Testing the job demands-resources model. | (Laschinger, Grau, Finegan, & Wilk, 2012) | 1 | 0 | 1 | 1 | 1 | 1 | 5/6*100 | 83.3% | Good |



| | | | | | | | | | | |
|--|--------------------------------|---|---|---|---|---|---|---------|--------|--------------|
| A survey of work engagement and psychological capital levels. | (Bonner, 2016) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Psychological Capital Predicts Academic Engagement and Well-being in Filipino High School Students | (Datu & Valdez, 2016) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| The mediator role of Psychological Capital: A study among authentic leadership, work engagement, and psychological capital(Conference Paper) | (Zhong, Li, Liu, & Chen, 2016) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Psychological capital bolsters motivation, engagement, and achievement: Cross sectional and longitudinal studies. | (Datu, King, & Valdez, 2016) | 0 | 0 | 1 | 0 | 1 | 1 | 3/6*100 | 50% | Satisfactory |
| Impact of psychological capital and authentic leadership on work engagement and job related affective well-being. | (Adil & Kamal, 2016) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |



| | | | | | | | | | | |
|---|--|---|---|---|---|---|---|---------|--------|--------------|
| The relationship among college students' psychological capital, learning, empowerment and engagement. | (You, 2016) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| An empirical investigation of psychological capital among flight attendants. | (Karatepe & Talebzadeh, 2016) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Happy employees in a resourceful workplace: just a direct relationship? | (Mazzetti, Guglielmi, Chiesa, & Mariani, 2016) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Psychometric Properties of the Italian Version of the Psychological Capital Questionnaire. | (Alessandri, Borgogni, Consiglio, & Mitidieri, 2015) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Extending the challenge-hindrane stressor framework: The role of psychological capital | (Min, Kim, & Lee, 2015) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Mindfulness at Work: Positive Affect, Hope, and Optimism Mediate the Relationship Between Dispositional | (Malinowski & Lim, 2015) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |



Mindfulness, Work Engagement, and Well-Being.

| | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---------|--------|--------------|
| The consequences of Job crafting: a three-wave study. | (Vogt, Hakanen, Brauchli, Jenny, & Bauer, 2015) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Psychological capital and well-being: The moderating role of psychological detachment from work. | (Virga & Paveloni, 2015) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Psychological capital, adaptability, coping with change, and employee engagement in a multinational company. | (Hicks & Knies, 2015) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| The relationship of leader psychological capital and follower psychological capital, job engagement and job performance: a multilevel mediating perspective. | (Chen, 2015) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Personal factors as a predictor of lecturer's | (Shaleh & Azwar, 2015) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |



performance

| | | | | | | | | | | |
|--|-------------------------------------|---|---|---|---|---|---|---------|--------|--------------|
| Customer delight and Work engagement. | (Barnes, Collier, & Robinson, 2014) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Psychological Capital, LMX, Employee Engagement & Work Role Performance. | (Chaurasia & Shukla, 2014) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| The Effect of Organizational Support, Transformational, Leadership, Personnel Empowerment, Work Engagement, Performance and Demographical Variables on the Factors of Psychological Capital. | (Şahin, Çubuk, & Uslu, 2014) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Engaging new nurses: the role of psychological capital and workplace empowerment. | (Boamah & Laschinger, 2014) | 0 | 0 | 0 | 1 | 1 | 1 | 3/6*100 | 50% | Satisfactory |
| Psychological capital, Work engagement and | (Simons & Buitendach, 2013) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |



organizational
commitment
amongst call centre
employees in South
Africa.

Towards
understanding
causality between
Work engagement
and psychological
capital.

(De Waal &
Pienaar, 2013)

0 0 1 1 1 1 4/6*100 66.67% Satisfactory

The Impact of
Buddying on
Psychological
Capital and Work
Engagement: An
Empirical Study of
Socialization in the
Professional Services
Sector.

(Nigah, Davis,
& Hurrell,
2012)

0 0 1 1 1 1 4/6*100 66.67% Satisfactory

Setting the stage for
effective safety
leadership in
construction: The
antecedents of safety
specific
transformational
leadership behaviours

(Cheung &
Qingbin, 2016)

0 0 1 1 1 1 4/6*100 66.67% Review

Influences on new
graduate nurse
transition: A
literature review

(Dwyer &
Revell, 2016)

0 0 1 1 1 1 4/6*100 66.67% Review



using a social ecological framework.

Employee Engagement and Positive Psychological Capital.

(Thompson, Lemmon, & Walter, 2015)

Review

Salesperson engagement and performance: A theoretical model.

(Medhurst & Albrecht, 2011)

Theoretical Study

A study on the impact of hotel leaders' psychological capital on employee engagement.

(Meng, Qi, & Li, 2011)

Review

Happy@Work: Protocol for a web-based randomized controlled trial to improve mental well-being among an Asian working population.

(Yuan, Liu, Tang, & Zhang, 2014)

0

0

0

0

1

1

2/6*100

33.33%

Bad

Positive Psychology at **work**: A conceptual review, state-of practice assessment, and a look ahead.

(Mills, Fleck, & Kozikowski, 2013)

0

0

0

0

1

1

2/6*100

33.33%

Bad

Positive Psychology

(Soni, Rastogi,

Inaccessible



at Work: & Garg, 2016)
Psychological
Capital, as a
pathway to
Employee
Engagement.

The influence (Chen &
mechanisms of Huang, 2014)
transformational
leadership on job
engagement: the role of
psychological capital
and service climate.

Knowledge workers'
job stress and work
engagement: The
mediating effect of
psychological capital

The emergence of (Bakker,
positive occupational Rodríguez-
health psychology. Muñoz, &
Derks, 2012)

Psychological resources (Vink,
for engaged employees: Ouweneel, & le
Psychological capital in Blanc, 2011)
the Job Demands-
Resources Model.

Inaccessible

Inaccessible

English
version
unavailable

Inaccessible



2.4.10.7 Data extraction

An adapted version of the data extraction tool adapted by Roman and Frantz (2013) was adapted and utilized for the purpose of the review. The data that was gathered from the extraction tool included: the author(s) name(s), country/geographical location, study design, participant demographic details, measures used, data on the association that was found and the findings.



Table 2.6

Data Extraction Tool: PsyCap & WE

| <i>S/N</i> | <i>Authors</i> | <i>Country/ Geographical Allocation/ Sector/ Participants</i> | <i>Study Design</i> | <i>Instruments used</i> | <i>Sample Size/ Participants</i> | <i>Relationship between Psychological Capital and Work Engagement</i> |
|------------|-------------------------|---|---|---|--|---|
| 1. | (Bonner, 2016) | London. Registered nurses. Agenda for Change band 5, 6 and 7 nurses (NHS Employers, 2013a) in a London teaching hospital. | Convenience sampling. Quantitative cross- sectional survey using self-reported questionnaires. | Work Engagement was measured using the Utrecht Work Engagement Scale (UWES-17 items) by Schaufeli and Bakker, 2003. Psychological Capital was assessed the PsyCap Questionnaire (PCQ-24 Items) by Luthans, Avolio & Luthans & Avolio 2007. | 137 volunteer participants was invited from the population of 2207 NHS nurses. Gender Female = 114 (83.8%) Male = 22 (16.2%) Age < 25years = 30(21.97%) 25–35years = 55(40.1%) 35–45years = 28(20.4%) 45–55years = 19(13.9%) > 55years = 5 (3.6%) | Statistically significant, strong correlation between WE and PsyCap. This study supports PsyCap as an antecedent to work engagement. |
| 2. | (Adil & Kamal, 2016) | Islamabad, Pakistan. University Teachers from various public sector universities of the Punjab province, capital city of Islamabad. | Convenient sample. Cross-sectional design. | Authentic leadership through ALQ, 16-item by Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008. Psychological Capital through PsyCap Questionnaire (Luthans, Youssef, & Avolio, 2007). Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006). Job Related Affective Well-being Scale (JAWs) by Van Katwyk, Fox, Spector & Kelloway, 2000. | 500 teachers. Age range = 22 – 60years Mean Age = 31.78 years Married = 274 Unmarried = 226 | WE partially mediated the relationship between PsyCap and authentic leadership with JAW. WE mediated the relationship of PsyCap and job related affective well- being. |

| | | | | | |
|----|--|--|--|---|---|
| 3. | (Wingerden, Bakker, & Derks, 2016) Country not stated. Healthcare professionals who diagnose, identify, and treat patients with a hearing impairment. | Quasi-experimental pre-test-post-test design with a control group. Online questionnaires | <p>Psychological Capital consists of self-efficacy, optimism, hope, and resilience. Self-efficacy was measured with 4 items by Schwarzer and Jerusalem, 1995. Optimism was measured with 4 items by Luthans, Avolio, Avey & Norman, 2007. Hope was measured with 6 items by Luthans et al., 2007. Resilience was measured with 5 items by Block and Kremen, 1996.</p> <p>Job crafting was measured using three subscales (5 items each) of the job crafting questionnaire developed by Tims, Bakker & Derks, 2012.</p> <p>Work Engagement was measured with the 9-item Utrecht Work Engagement Scale by Schaufeli, Bakker & Salanova, 2006.</p> <p>In-role performance was measured using the in-role performance scale by Williams and Anderson, 1991, which consists of 7 items.</p> | 67 employees JD-R intervention = 43 Control Group = 24 Gender Female = 64 (96%) Male = 3 (4%) Mean Age = 42years | Results showed that participants' PsyCap, job crafting, work engagement, and self-ratings of job performance significantly increased after the JD-R intervention. Organizations can foster WE and improve performance by offering a JD-R intervention aimed at increasing PsyCap and job crafting at work. |
| 4. | (Mazzetti, Guglielmi, Chiesa, & Mariani, 2016) Northern Italy. Headquarters of a large-scale retail company. | Cross-sectional design. | <p>Autonomy: Perceived autonomy in performing one's job was assessed using three items from the Job Content Questionnaire by Karasek, Brission, Kawakami, Hiutman, Bongers & Amick, 1998; Italian version of Ferrario, Fornari, Borchini, Merluzzi & Cesana, 2004.</p> <p>Co-workers support: The social support provided by colleagues was measured with four items taken from the Job Content Questionnaire by Karasek et al., 1998; Italian version of Ferrario et al., 2004.</p> <p>Psychological Capital: This personal resource was assessed using the 24-item measure of PsyCap Questionnaire by Luthans, Avolio, Avey & Norman, 2007; Italian version of Alessandri, Borgogni, Consiglio</p> | Employees were convened in groups of 30. 235 Italian employees Gender Female = 51.9% Male = 48.1% Blue-collar workers = 47.2% White collar employees = 31.9% Managers and supervisors = 20.9% Mean Age = 43.58 years | Autonomy and co-workers' support were positively associated with PsyCap. PsyCap fully mediated the effect of job resources on WE and psychological distress. The results indicate that if a greater degree of autonomy is allowed to employees in performing their work, and if they receive social support from co-workers, this may |

| | | | | | |
|-----------------------|---|------------------------------|---|--|---|
| | | | <p>& Mitidieri, 2015, which includes four subscales of six items each: self-efficacy, hope, optimism, and resiliency.</p> <p>Work engagement: The nine-item version of the Utrecht Work Engagement Scale by Schaufeli, Bakker & Salanova, 2006; Italian version of Balducci, Fraccaroli, Schaufeli, 2010.</p> <p>Psychological distress: This variable was assessed using the 12-item version of the General Health Questionnaire by Goldberg & Williams, 1988; Italian version of Giorgi, Leon Perez, Castiello D'Antonio, Fiz Perez, Arcangeli, Cupelli & Mucci, 2014 .</p> | <p>Mean Job Tenure in current company = 14.51 years</p> | <p>significantly contribute to building employees' personal resources such as PsyCap.</p> <p>This positive association between job resources and PsyCap, in turn, leads to employees WE and prevents them from harmful outcomes such as symptoms of psychological distress.</p> |
| <p>5. (You, 2016)</p> | <p>Korea. Participants were drawn from five four-year private universities in and near Seoul.</p> | <p>Convenience sampling.</p> | <p>Psychological capital: Students' PsyCap was measured with PCQ-17 items from Yoo, 2004. The items were developed based on Luthans, Avolio et al., 2007. This scale consists of four subscales - self-efficacy (4-items), hope (3-items), optimism (3-items), and resilience (4-items).</p> <p>Learning empowerment: Learning empowerment was measured with three subscales (meaningfulness, competence & impact) by Frymier, Shulman & Houser, 1996. Nine items were translated into Korean and reviewed by one colleague and four undergraduate students to ensure the items were understandable.</p> <p>Engagement: Engagement scale by He, 2009 was used to assess engagement. The scale encompasses cognitive, emotional, and behavioural engagement and measures engagement at the course level. The scale is composed of 20 items but two cognitive engagement items were deleted to improve fit.</p> | <p>490 college students.</p> <p>Gender Female = 246 (50.2%) Male = 244 (49.8%)</p> <p>Mean age = 23.5years</p> | <p>The results indicated that college students' PsyCap had a significant positive relationship with learning empowerment.</p> <p>PsyCap indirectly enhanced engagement.</p> <p>Learning empowerment fully mediated the relationship between PsyCap and engagement.</p> |

| | | | | | | |
|----|------------------------------------|--|--|---|--|--|
| 6. | (Luthans, Luthans, & Palmer, 2016) | USA. Students from 2 Midwestern universities. | Cross-sectional design | <p>Student PsyCap was assessed with the 24-item PCQ measure developed by Luthans et al., 2007 and adapted the measure to assess the PsyCap</p> <p>Student engagement was assessed with 3 measures developed by Carle, Jaffee, Vaughan & Eder, 2009 using items drawn from the National Survey of Student Engagement Scales (NSSE). The measures assessed specific engagement concepts such as college students' engagement with their faculty, CBA, and TLO. The first measure, SFE, is a five-item measure that assesses the extent to which students engage with faculty, then using a four-item CBA measure which assesses the extent to which students plan to or have engaged in educationally purposeful community activities and then finally, student engagement was assessed using a six-item measure of TLO. These three measures of engagement were developed using item response theory (IRT) analyses (Carle et al., 2009; Embretson and Reise, 2000).</p> | <p>323 undergraduate business students</p> <p>Gender Male = 55% Female = 45%</p> <p>Full-Time students = 92% Junior/senior level = 76%</p> | Results indicated significant positive relationships between academic PsyCap and engagement. |
| 7. | (Karatepe & Talebzadeh, 2016) | Iran. Flight attendants with private airline companies. Out of 13 private airline companies which had international and/or domestic flights, the management of 3 airline companies agreed to participate in the study. | <p>Two-week time lag in three waves</p> <p>Study obtained data from flight attendants in three waves where the three waves were separated by a time lag of two weeks</p> | <p>Time 1 questionnaire included the servant leadership measure. Time 2 questionnaire contained the PsyCap and WE measures, while the Time 3 questionnaire comprised of the life satisfaction measure.</p> <p>Servant leadership was assessed with a 6-item scale by Lytle, Hom & Mokwa, 1998.</p> <p>PsyCap was gauged with 24 items taken from Luthans et al., 2007.</p> <p>Work Engagement was operationalized with the shortened version of the Utrecht WE scale by Scahufeli et al., 2006.</p> | <p>200 flight attendants.</p> <p>Gender Female = 56% Male = 44%</p> <p>Age 18-27 = 59(30%) 28-37 = 120(60%) > 37 = 21(10%)</p> <p>Organizational Tenure < 5 = 117(59%) 6-10 years = 70(35%) > 10 = years = 13(6%)</p> | <p>The results suggest that servant leadership influences WE indirectly only through PsyCap.</p> <p>WE partially mediates the influence of PsyCap on service recovery performance and life satisfaction.</p> <p>PsyCap boosts attendants' WE.</p> <p>PsyCap fully mediates the</p> |

| | | | | | | |
|----|--------------------------------|---|---|---|---|--|
| | | | Service recovery performance was gauged with 5 items obtained from Boshoff & Allen, 2000. | | Marital Status Married = (40%) Single/Divorced = (60%) | effect of servant leadership on WE. |
| 8. | (Zhong, Li, Liu, & Chen, 2016) | China. Organizations - joint venture, public and private organizations in Beijing. | Correlational Research design. Survey | Authentic leadership using ALQ – 16item from mind garden by Avolio, Gardner & Walumbwa. Psychological Capital using the PCQ -24item questionnaire proposed by Luthans, Youssef, Avolio & Li, 2007. Utrecht Work Engagement Scale (UWES-9) by Schaufeli, Dijkstra & Shi, 2014. | 304 employees Gender Female = 52.3% Male = 47.7% Mean Age = 2.72years | The results showed that both AL and PsyCap positively related to WE of employee, and AL also positively related to PsyCap. A mediation analysis with the use of a boots trapping technique revealed that PsyCap mediates the relationship between AL and WE. The study recommends that organizations could conduct more training programs on AL development to stimulate leaders to become more authentic, and provides PsyCap orientation to employees to improve employee's WE in the positively improving the organization performance. |
| 9. | (Datu, King, & Valdez, 2016) | Philippines Filipino high school students. | Cross-sectional study | Psychological Capital The 16-item modified version of the Psychological Capital Scale by Luthans, Avolio, Avey & Norman, 2007 and Luthans, Youssef & Avolio, 2007 was used in | 384 Filipino high school students Average Age = 14.34 years | The findings of Study 2 corroborated that PsyCap served as a concurrent and prospective predictor of |



the current research.

Academic Motivation

The revised version of the Academic Motivation Scale by Caleon, Wui, Tan, Chiam, Soon & King, 2015 was used to measure students' amotivation, controlled motivation, and autonomous motivation.

Academic Engagement

Only a nine-item teacher-rated scale of student engagement was used in Study. The scale gauged behavioural engagement, cognitive engagement, and emotional engagement of each student.

The items in behavioural engagement (three items) and emotional engagement (three items) dimensions were derived from the Academic Engagement and Disaffection Scale of Skinner, Kindermann, & Furrer, 2009 whilst

the items in the cognitive engagement dimension was selected from the cognitive engagement scale subscale used by Wolters, 2004.

Academic Achievement

The general average of students across two grading periods were obtained from the teachers' class records. Particularly, the participants' general average on all subject areas (e.g. Arts, English, Filipino, Mathematics, Science, Physical Education, Social Science, and Technology and Livelihood Education).

Study 1 – Examining the association between PsyCap and academic motivation.

Study 2 – Examining the association between PsyCap, academic engagement and achievement.

optimal academic outcomes (e.g. autonomous motivation, academic engagement, and achievement) and negatively associated with a maladaptive outcome (i.e. amotivation).

Autonomous motivation may serve as a concrete theoretical mechanism as to why PsyCap may be associated with higher academic achievement and engagement at a later time point.

| | | | | | | |
|-----|-----------------------|---|------------|---|---|--|
| 10. | (Datu & Valdez, 2016) | China Filipino high school students. | Not stated | Academic Engagement The Academic Engagement Scale by Skinner, Kindermann & Furrer, 2009 is a 20-item questionnaire that measures the extent to which students are motivated to participate and feel good about their | 606 Filipino high school students Gender Female = 305 | SEM revealed that PsyCap positively predicted academic engagement, flourishing, interdependent |
|-----|-----------------------|---|------------|---|---|--|

classroom activities. Only the 10 items that are subsumed in the academic engagement dimension (behavioural engagement and emotional engagement) were used.

Male = 300
Unreported = 1

happiness, and positive affect.

Flourishing

The Flourishing Scale by Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi & Biswas-Diener 2010 is an 8-item questionnaire that gauged holistic well-being.

The results showed full support as the path from PsyCap to academic engagement was significant. This suggests that students who espouse combination of hope, optimism, resilience, and self-efficacy may actively partake in various classroom tasks (behavioural engagement) and feel good in doing academic activities (emotional engagement).

Interdependent Happiness

The Interdependent Happiness Scale by Hitokoto & Uchida, 2015 is a 9-item questionnaire that measured the relationally oriented happiness that is quite prominent in collectivist settings.

Positive Affect

The 10-item version of the Positive and Negative Affect Scale was used in the current study. Only the items referring to positive emotions (e.g., inspired and excited) were utilized.

The results also showed a positive association between PsyCap and well-being outcomes.

Psychological Capital

The 16-item modified version of the Psychological Capital Scale by Luthans, Avolio, Avey & Norman, 2007 and Luthans, Youssef & Avolio, 2007 was used in the current research.

11. (Joo, Lim, & Kim, 2016) Korea. Knowledge workers conglomerate in the private sector that consists of 12 subsidiaries. Cross-sectional survey

PsyCap was assessed using the 24-item Psychological Capital Questionnaire (PCQ), which was developed and validated by Luthans et al., 2007.

599 knowledge workers

The results suggest that employees were highly engaged when they had higher PsyCap.

Authentic leadership was assessed with the 16-item Authentic Leadership

Gender
Male = 81%
30s = 39%
40s = 48%

Work empowerment

| | | | | | |
|-----|--|--|--|--|--|
| | | | <p>Questionnaire that was developed and validated by Avolio, Gardner & Walumbwa, 2005.</p> <p>Work empowerment was assessed with a subjective measure based on the employees' perception of their work. 12 items from the WCI – Nimon, Zigarmi, Houson, Witt & Diehl, 2011 was adapted to assess the four dimensions of positive experience of employees' jobs.</p> <p>Work engagement was assessed with UWES 9 by Schaufeli, Bakker & Salanova, 2006 to measure the level of perceived work engagement of the participants.</p> | | <p>partially mediated the relationship between PsyCap and WE.</p> <p>AL was found to moderate the relationship between PsyCap and work empowerment. The proposed moderation effect of AL on the relationship between PsyCap and WE turned out to be non-significant.</p> |
| 12. | (Karatepe & Karadas, 2015) | Romania. Employees in frontline service jobs in Hotel Industry. | <p>No-probability sampling. Judgmental sampling.</p> <p>Psychological Capital (PsyCap) with 24-items from Luthans, Youssef & Avolio, 2007.</p> <p>Work engagement using the shortened version of UWES – 9 items by Schaufeli, Bakker & Salanova, 2006.</p> <p>Employees' Career Satisfaction with 5 items by Greenhaus, Parasuraman & Wormley, 1990.</p> <p>Job satisfaction using 3 items taken from Netemeyer, Boles, McKee & McMurrin, 1997.</p> <p>Life Satisfaction through a 5-item scale from Diener, Emmons, Larsen & Griffin, 1985.</p> | <p>356 Respondents</p> <p>Gender Male = 142 Female = 140</p> <p>Age 18 – 27 years = 67(24%) 28 – 37 years = 158(56%) > 38 years = 57(20%)</p> <p>Organizational Tenure > 5 years = 63(22%) < 5 years = 219(78%)</p> | <p>PsyCap boosts WE. Although optimism seemed to be the best indicator of PsyCap.</p> <p>WE partially mediates the relationship between PsyCap and Job, Career and Life satisfaction.</p> |
| 13. | (Alessandri, Borgogni, Consiglio, & Mitidieri, 2015) | Italy, Rome. <u>Sample 1</u> Workers from different large public and private | <p>Not stated</p> <p>PsyCap was assessed with the Italian version of the 24-item PCQ by Luthans, Avolio, Avey & Norman 2007.</p> <p>Work engagement was measured by the Italian version of the Utrecht Work Engagement Scale (UWES-9), Balducci, Fraccaroli, & Schaufeli, 2010; Schaufeli &</p> | <p>Two different samples were obtained for the study.</p> <p>Sample 1 Respondents = 401</p> | <p>Positive, significant relationship between PsyCap and WE.</p> <p>The combined integrative measure of PsyCap was</p> |

organizations.

Sample 2

White collar employees from line functions working for a large Italian firm.

Bakker, 2004.

Job satisfaction was measured with three items adapted from the overall job satisfaction scale used by Judge, Bono, and Locke, 2000.

Job performance was measured with the company's performance appraisal tool by Supervisors rating their subordinates' performance. This measure has been extensively validated in previous studies (Alessandri & Borgogni, 2015; Alessandri, Borgogni, & Truxillo, 2014). Comprised of five items, each assessing a specific performance-domain, namely: 'customer focus'; 'communication'; 'network management'; 'problem solving'; and 'change management'.

Gender

Male = 70%

Female = 30%

Age range = 24 - 70years

Job Tenure = 1 - 44years

Sample 2

Respondents = 465

Gender

Male = 60%

Female = 40%

Mean Age = 45.87 years

Average organizational tenure = 16.23 years

14. (Vogt, Hakanen, Brauchli, Jenny, & Bauer, 2015)

Three European German speaking Countries – Austria, Germany and Switzerland. Employees working in a broad range of economic sectors and occupations.

Longitudinal Study – 3wave measurements with 3-month time intervals. Online panel data service.

Job crafting was measured using “increasing structural job resources – 5items” and “increasing social job resources – 5items” from the scale by Tims, Bakker, & Derks, 2012 and “seeking challenges – 3items” by Petrou, Demerouti, Peeters, Schaufeli & Hetland, 2012.

Work engagement was assessed the UWES-9 by Schaufeli, Bakker & Salanova, 2006.

Psychological Capital was measured with the 12-item PsyCap Questionnaire by Luthans, Avolio, Avey & Norman, 2007.

940 employees.

Countries

Germany = 50%

Austria = 31%

Switzerland = 18%

Gender

Male = 58%

Female = 42%

Mean Age = 39.64

Mean Organizational Tenure = 9.16years

more realistic to predicting WE than using the Individual states of PsyCap.

Job crafting predicted PsyCap and WE over time.

PsyCap and WE did not predict Job crafting.

Participants from Switzerland were slightly older and more engaged.

Participants from Germany had slightly lower PsyCap values.

| | | | | | | |
|-----|-----------------------|---|--|--|--|--|
| 15. | (Hicks & Knies, 2015) | Europe. Multinational organization that produces cables and conductors for different industries and markets. Sample from Europe, America, and Asia. Headquarters in Europe. | Not stated | <p>Psychological Capital Questionnaire – PCQ – 24items by Luthans, Avolio et al., 2007 measured psychological capital.</p> <p>Utrecht Work Engagement Scale – UWES – 17items by Schaufeli & Bakker, 2004 assessed work engagement.</p> <p>Adaptation to the 2009 economic crisis was assessed using a 4-item scale developed for the current study in order to assess employees’ beliefs on how well they and the organization had handled the economic crisis of 2009. Scale by Hicks & Knies, 2015.</p> <p>Organizational Change – CO – 12items by Judge, Thoresen, Pucik, & Welbourne, 1999 measured coping with organizational change.</p> | <p>183 employees</p> <p>Country American = 55 (30%) European = 69 (38%) Asian = 59 (32%)</p> <p>Gender Male = 134 (73%) Female = 49 (27%)</p> <p>Main age range 30-39 years = (31%) 40-49 years = (28%)</p> | <p>PsyCap significantly predicted coping with organizational change, the adaptation demonstrated in handling the GFC, and the engagement levels of the employees in each region.</p> <p>Strong relationship between PsyCap and WE among individuals who survived the GFC crisis.</p> <p>Similarities in the models across each region suggest that organizational managers and HR will find value in understanding and using PsyCap in their recruitment, selection and employee enhancement programs.</p> |
| 16. | (Chen, 2015) | Taiwan. Large telecom company. | <p>Cross-lagged time design with data collected in three phases from multiple sources.</p> <p>The time interval between two adjacent phases ranged from 12 to 15 weeks</p> | <p>Leader and follower PsyCap was measured with the PsyCap questionnaire – PCQ-24items by Luthans, 2007.</p> <p>Job engagement assessed the level of employee engagement. It was measured with UWES – 17items by Schaufeli, Bakker & Salanova, 2006.</p> <p>Job performance scale has two dimensions: task performance and contextual performance. Leaders rated the job performance of their followers using items adapted from the 8-item task performance scale developed by Motowidlo & Van Scotter, 1994 and the 4-item contextual performance scale developed by</p> | <p>60 leaders and 319 followers.</p> <p>Leader Average Age = 48years Average Tenure = 22years Male = 70% Female = 30%</p> <p>Follower Average age = 40years Average tenure = 14years Male = 46% Female = 54%</p> | <p>Leaders’ PsyCap was positively related to their job engagement through the mediation of followers’ PsyCap.</p> <p>Job engagement mediated the relationship between followers’ PsyCap and their job performance.</p> |

| | | | | | | |
|-----|--------------------------|---|--|--|---|---|
| 17. | (Virga & Paveloni, 2015) | Romania. Employees from a multinational company in the IT & C field. | Online sampling platform. Non-probabilistic convenience sampling. | <p>Hochwarter, Kiewitz, Gundlach, & Stoner, 2004.</p> <p>Psychological capital was measured with the 24-item PsyCap Questionnaire by Luthans et al., 2007.</p> <p>Psychological detachment (PD) from work was measured with a four-item scale developed by Sonnentag & Fritz, 2007.</p> <p>Burnout was measured with two subscales from the Maslach Burnout Inventory General Survey - MBI-GS by Schaufeli, Leiter, Maslach, & Jackson, 1996 and Exhaustion - 5 items and Cynicism - 4 items.</p> <p>Work engagement was measured with the short version of the Utrecht Work Engagement Scale - UWES-9 by Schaufeli, Bakker, & Salanova, 2006. : Vigour (3 items) and Dedication (3 items).</p> | <p>121 employees.</p> <p>Gender Males = 62 (51.2%) Females = 59 (48.8%)</p> <p>Age range = 21 - 58years Average Age = 35.88</p> | <p>Psychological detachment did not moderate the relationship between PsyCap and dedication.</p> <p>PsyCap was associated with WE and Burnout.</p> <p>Psychological detachment was negatively related to dedication but positively with Cynicism.</p> |
| 18. | (Min, Kim, & Lee, 2015) | South Korea. 7 mid-to-upscale Hotels. Five of the seven hotels are in Seoul, and two are in other cities. | Not stated. | <p>Challenge and hindrance stressors were measured with the scale developed by Cavanaugh, Boswell, Roehling & Boudreau, 2000. Challenge stressors include 6 items and hindrance stressors include 5 items.</p> <p>Psychological capital by Luthans et al., 2007 is comprised of 12 items: self-efficacy - 3items, hope - 4items, resilience - 3items and optimism - 2items.</p> <p>Burnout was measured with Maslach Burnout Inventory General Survey - MBI-GS, by Maslach, Jackson & Leiter, 1986. Two core dimensions of burnout (exhaustion - 5items and cynicism - 5items) were used in this study.</p> <p>Job engagement was assessed by the Utrecht Work Engagement Scale by Schaufeli et al., 2006. Two</p> | <p>232 hotel employees</p> <p>Gender Males = 149(64.2%) Females = 83(35.8%).</p> <p>Years of work experience in the hotel industry = 1 month - 28 years</p> <p>Mean = 8years, 3months</p> | <p>Employees' PsyCap buffers the negative impacts of both challenge and hindrance stressors on job burnout.</p> <p>WE increases or remains the same throughout the progression of challenge stressors for employees high in PsyCap whilst WE decreases for employees low in PsyCap.</p> <p>No moderating effect of PsyCap was found in the relationship between hindrance stressors and WE.</p> |

| | | | | | | | |
|-----|-------------------------------------|--|--|--|---|---|--|
| 19. | (Paek, Schuckert, Kim, & Lee, 2015) | Korea. Hotel employees with 15 five-star hotels in Seoul. | A one-month time-lag design. | dimensions of engagement - vigour and dedication were used. | PsyCap and work engagement were assessed at Time 1. | 312 front-line Staff | The results suggest that WE partially mediates the effect of PsyCap on job satisfaction and affective organizational commitment. |
| | | | | PsyCap was measured using the 24-item instrument developed by Luthans et al., 2007. The instrument comprises six items for measuring each of the four factors. | | | |
| | | | | The short form of the Utrecht Work Engagement Scale (UWES-9) developed and validated by Schaufeli et al., 2006 was used to assess work engagement. | | | |
| | | | | Job satisfaction and affective organizational commitment as employee morale were measured at Time 2. | | | Front-line employees with high PsyCap are more engaged with their work and more likely to display job satisfaction and affective organizational commitment. |
| | | | | Job satisfaction was operationalized using 8 items from Hartline & Ferrell, 1996. | | | |
| | | | | Affective organizational commitment was operationalized using an 8-item scale by Allen & Meyer, 1990. | | | WE was shown to be a positive consequence of PsyCap and the antecedent of the two variables of employee morale. |
| 20. | (Malinowski & Lim, 2015) | Adults with a Western background or were based in one of 36 Western Countries. | Participants were recruited via posts on the university website and social networking websites such as Facebook, Linked In, Yahoo Groups and emails. | Dispositional trait mindfulness was measured with the 5-Facet Mindfulness Questionnaire – FFMQ by Baer, Smith, Hopkins, Krietemeyer & Toney, 2006. | The FFMQ is a 39-item scale assessing the following 5 components of mindfulness: observing, describing, acting with awareness, non-judging, and non-reacting. | 299 adults in full-time employment. | Relationships are mediated by positive job-related affect and PsyCap |
| | | | | Work engagement was assessed with UWES-9 by Schaufeli et al., 2006. | | Gender Female = 176 Male = 123 | |
| | | | | Positive mental well-being was assessed with the | | Mean age = 40.1 years, Mean tenure = 5.75years | Mindfulness exerts its positive effect on WE by increasing positive affect, hope, and optimism, which on their own and in combination enhance WE (full mediation). |

| | | | | | | |
|-----|------------------------------|--|------------|---|---|--|
| | | | | <p>Warwick-Edinburgh Mental Well-Being Scale – WEMWBS by Tennant, Hiller, Fishwick, Platt, Joseph & Weich, 2007. It consists of 14 items that cover a broad range of positive health indicators, including hedonic and eudemonic perspectives.</p> <p>Psychological capital was assessed with the – PCQ-24 by Luthans, Avolio, Avey & Norman, 2007a and Luthans, Youssef & Avolio, 2007b.</p> <p>Job-related positive affect was measured with a shortened version of the Job-related Affective Well-being Scale – JAWS by Van Katwyk, Fox, Spector & Kelloway, 2000. . The scale used in this study was limited to the positive items.</p> | <p>Non-meditators = 146 Meditators = 153</p> <p>Average meditation Experience = 8.9 years</p> | <p>Well-being is directly influenced by mindfulness which exerts additional indirect influence via positive affect, hope, and optimism (partial mediation).</p> |
| 21. | (Shaleh et al., 2015) | Indonesia. Lecturers from nine state universities. | Not Stated | <p>Job performance was measured using dimensions developed by Hemming and Kay (2009) and adjusted with the items faculty workload (BKD).</p> <p>Psychological capital was measured adapting PCQ items from Luthans and Youssef (2007).</p> <p>Professionalism was measured using professionalism aspects provided by Tromp, et al. (2007).</p> <p>Work engagement was measured with Bakker & Schaufeli's work engagement and burnout scale (2004).</p> | 590 lecturers | <p>The findings revealed that Psycap and professionalism have a significant influence on WE.</p> <p>WE has no significant effect on the job performance of the lecturer.</p> |
| 22. | (Şahin, Çubuk, & Uslu, 2014) | Internet link via emails. | Not stated | <p>Transformational Leadership Scale – 24 items from Multifactor leadership questionnaire by Avolio, 1995.</p> <p>Perceived Organizational Support – 8 items by Saks, 2006.</p> <p>That's being Empowered – 15 items coupled together</p> | <p>356 responses received.</p> <p>Gender Female = 179 Male = 177</p> <p>Age</p> | <p>WE is an effective variable on PsyCap.</p> |

| | | | | | |
|-----|-------------------------------------|--|--|---|---|
| | | | from Spreitzer, 1995; Sim et al., 1976; Beyerlein, 1993 and Hacman & Oldham, 1980. | < 29years = 137(38.5%) 30–39years = 122(34.3%) 40–49years = 65(18.3%) > 50years = 32 (9%) | |
| | | | Work Engagement Scale – 9 item UWES by Schaufeli, Salanova & Bakker, 2006. | Mean Age = 34.5 years | |
| | | | Perceived Performance Test - 5 items used to measure the individual job performance consisting of 1 item added to the 4 items that Sigler & Pearson, 2000 adapted from Kirkman & Rosen, 1999. | Average working years in current organization = 6.69 | |
| | | | Psikolojik Sermaye Ölçeği - 50-item scale was developed by the researcher by bringing together Snyder et al's (1996) situational hope, Scheier & Carver's (1985) situational optimism, Block & Kremen's (1996) and Wagnild & Young's (1993) resilience, Parker's (1998) role-oriented self-efficacy inventories. This was used to measure psychological capital. | | |
| 23. | (Barnes, Collier, & Robinson, 2014) | USA. Respondents were recruited utilizing the student referral method in the southeastern and northeastern regions of the USA. Frontline service employees | Cross-sectional data utilizing a snowballing procedure. Customer delight came from the seminal article on customer delight by Oliver, Rust & Varki 1997. The customer service-based role conflict items were developed from the role conflict scale of Rizzo, House & Lirtzman , 1970. Only items that reflected a customer focus were adapted. Psychological capital scale was adapted from the PCQ by Luthans, Avolio, Avey, & Norman, 2007. Work engagement with an adapted version of Utrecht Work Engagement Scale (UWES) by Schaufeli & Bakker 2003). | 35 items were created to capture the constructs in the study. 252 frontline service employees responded to the pre-test. Two different samples were obtained for the main study. Sample 1 Respondents = 306 Gender Female = 70% Male = 30% | WE had a strong and positive relationship with employees' PsyCap. Findings prove across both samples provide evidence that engaged employees were able to create a PsyCap. |

| | | | | | | |
|-----|----------------------------|--|------------------------------|---|--|---|
| | | | | Mean Age = 27 years | | |
| | | | | Sample 2 Respondents = 395 | | |
| | | | | Gender Female = 60% Male = 40% | | |
| | | | | Mean Age = 32 years | | |
| 24. | (Chaurasia & Shukla, 2014) | India. Working managers at different levels in various sectors. | survey based research design | Leader Member Exchange: The Leader-Member Exchange (LMX) scale by Graen & Cashman, 1975 is employed to measure the quality of exchange between supervisors and subordinates. Psychological Capital: Psychological Capital (PsyCap) is measured using the 24 item - PCQ by Luthans, Youssef & Avolio, 2007. Employee Engagement: Employee engagement is measured by Rich, Lepine & Crawford, 2010 as job engagement including physical engagement, emotional engagement and cognitive engagement. The questionnaire also includes organization engagement dimension defined by Saks, 2006 to integrate the employee engagement in various work roles. Work Role Performance: Work role performance is measured using the scale developed by Griffin, Neal & Parker, 2007 which includes three sub-dimensions of work role performance - proficiency, adaptivity, and proactivity at the individual, team and organization levels. The scale includes 27 items to measure 9 sub dimensions of performance which converged into three dimensions. | 298 employees. Gender Male = 78% Female = 22% Average age = 34years Organizational tenure = 11years | PsyCap and high quality leader member behaviour is positively related to employee engagement. High LMX helps to retain the talented work force and employees' PsyCap helps them engage and perform in their work roles. The mediating effect of employee engagement on the relationship between LMX, PsyCap and work role performance is highlighted. Employee engagement mediates the relationship between PsyCap performances by 59.95%. which support that individual's personal characteristics are not the only factor to engage an |

| | | | | | | |
|-----|------------------------------|--|---|---|--|---|
| 25. | (Siu, Bakker, & Jiang, 2014) | Hong Kong University students. | Two-wave cross-lagged design with 4 months apart. | <p>Psychological Capital: PCQ – 24items by Luthans et al., 2007 was used. The original PCQ – 24 was not used because of its low reliability in the Optimism and resilience dimensions in the present study.</p> <p>Siu, Hui, Phillips, Lin, Wong & Shi, 2009 - study of resiliency was used as it depicted a higher reliability in Chinese samples. Only 4 items which are similar to the items used by Luthans et al., 2007 were selected.</p> <p>Scheier, Carver & Bridges, 1994 was adapted for Optimism. Only 4 positive items were selected. We excluded the negative wording items because negative wording items often produce artificial factors.</p> <p>Snyder, Harris, Anderson, Holleran, Irving & Sigmon, 1991 hope scale was used. 4 items were also selected.</p> <p>Schwarzer, Babler, Kwiatek, Schroder & Zhang, 1997 - Generalized Self-efficacy Scale was used to measure self-efficacy. 4 items was also selected.</p> <p>Study Engagement: Utrecht SE Scale, with items referring to work or job replaced by studies or class. The short Chinese version (9 items) of Utrecht Work Engagement Scale was also adapted.</p> | <p>103 students</p> <p>Gender</p> <p>Females = 70</p> <p>Males = 33</p> | <p>employee.</p> <p>Study 1 evaluated the respective modified versions of existing scales of PsyCap and study engagement (SE), and to test the reciprocal relationship between PsyCap and SE.</p> <p>Study 2 tested Intrinsic motivation as a mediator between PsyCap and SE. The reciprocal relationship between PsyCap and SE was demonstrated.</p> |
| 26. | (Boamah & Laschinger, 2014) | Canada. Newly graduated nurses (defined as <2 years of experience) in acute care hospitals in Ontario. | <p>Second wave of a longitudinal study.</p> <p>Secondary analysis of this larger study using census drawn from the registry list of practising nurses in Ontario.</p> | <p>Structural empowerment was measured using the Conditions of Work Effectiveness-II (CWEQ-II). The CWEQ-II is a 12-item instrument that measures nurses' perceptions of access to empowerment structures originally described by Kanter, 1977.</p> <p>PsyCap was measured using the subscales of the Psychological Capital Questionnaire, PCQ-24 by Luthans et al., 2007.</p> <p>The short version of the Utrecht Work Engagement Scale, UWES-9 by Schaufeli et al., 2006.</p> | <p>205</p> <p>Gender</p> <p>Female = 183 = (89%)</p> <p>Male = 20 (11%)</p> <p>Average Age = 29 years.</p> <p>Average years worked at current organization = 1.71 years.</p> | <p>The combined effect of workplace empowerment and PsyCap explained 38% of the variance in new nurses' WE.</p> <p>Workplace empowerment and PsyCap were significant independent predictors of WE.</p> <p>Although not as a strong</p> |

| | | | | | | |
|-----|-----------------------------|--|--|--|---|---|
| 27. | (Simons & Buitendach, 2013) | South Africa. Kwazulu-Natal. Call center employees. | Cross-sectional survey design. Non-probability convenience sampling. | <p>Psychological Capital Questionnaire (PCQ) by Luthans, Avolio, Avey & Norman, 2007 – 24 items.</p> <p>Utrecht Work Engagement Scale (UWES) by Schaufeli, Salanova, Gonzalez-Roma & Bakker, 2002 – 17 items.</p> <p>Organizational Commitment Questionnaire (OCQ) by Allen & Meyer, 1990 – 18 items.</p> | <p>106 respondents.</p> <p>Gender Female = 75 (70.8%) Male = 31 (29.2%)</p> <p>Age < 24years = 40(37.7%) 25–35years = 50(47.2%) 36–45years = 16(15.1%) > 46years = 0 (0%)</p> <p>Tenure in Organization < 5 years = 88 (83%) 6 - 10 years = 8 (17%) 11 - 20 years = 0 (0%)</p> | <p>predictor of WE, PsyCap plays a significant role in nurses' perceptions of WE. Higher levels of PsyCap associated with higher levels of WE.</p> <p>The PsyCap sub dimensions and the WE sub dimensions were positively related although Optimism displayed a higher significant relationship with WE and its sub dimensions.</p> <p>Significant positive relationship between WE and OCQ and thus found to be a better predictor of OCQ than PsyCap.</p> |
| 28. | (De Waal & Pienaar, 2013) | South Africa. All employees within a chemical factory. | Quantitative, longitudinal research design that tested the cross-lagged effects between two measurements. Survey method. | <p>Utrecht's Work Engagement Scale (UWES) – 11 items by Schaufeli & Bakker 2003. Only vigour (6items) and dedication (5items) were assessed.</p> <p>Psychological Capital was derived from using 3 items each from the four constructs (hope, optimism, self-efficacy and resilience) that form the PsyCap Scale by Luthans, 2002.</p> | <p>163 received of 1003 questionnaires</p> <p>Gender Male = 113 (69.33%) Female = 50 (30.67%)</p> <p>Average Age = 40.4years</p> <p>Average tenure of years of service = 13.4 years.</p> | <p>Results revealed that PsyCap at Time 1 (T1) did not significantly predict engagement at Time 2 (T2). Evidence was however found that engagement at Time 1 predicted PsyCap at Time 2.</p> <p>Results did not indicate a significant effect of PsyCap on Work engagement over time.</p> |
| 29. | (Görgens- | South Africa. | Cross-sectional | Burnout: Work burnout was measured with the | 209 respondents | Results provided |

Ekermans & Herbert, 2013) Permanent employees within a medium-sized construction company in the Western-Cape. survey design.

Copenhagen Burnout Inventory (CBI) by Kristensen, Borritz, Villadsen & Christensen, 2005. The scale has three subscales: personal burnout, work-related burnout and client-related burnout but only the work-related burnout scale – 6 items, was used.

Stress: The Perceived Stress Scale (PSS) by Cohen, Kamarck & Mermelstein, 1983 was used to measure occupational stress. The PSS has 3 dimensions with 14 items.

Psychological capital: PsyCap was measured with the PCQ- 24. Hope items were adapted from Snyder, Simpson, Ybasco, Borders, Babyak & Higgins, 1996 - State Hope Scale. Optimism items from Scheier & Carver, 1985 - Measure of Optimism. Self-efficacy items from Parker, 1998 - Self-efficacy in the workplace. Resilience from Wagnild & Young, 1993 - Resilience Scale.

Work Engagement: Work Engagement Scale (UWES-9) developed by Schaufeli, Bakker, and Salanova (2006) was used to measure Work Engagement.

Gender
Males = (69.4%)
Females = (29.2%)

Mean Age = 35.34 years

Ethnicity
White = 45.9%
mixed-race = 38.3%
Black = 12.4%
Asian = 2.9%
Missing = 0.5%

preliminary evidence of construct and discriminant validity, reliability and significant relations with external theoretically relevant variables.

Researchers may confidently use the PCQ-24 to measure the construct of PsyCap and investigate relations with workplace outcomes in the South African environment.

There was sufficient evidence to suggest that the four-factor model fitted the data better than a one-factor model.

The results suggested that PsyCap is indeed a moderator in the relationship between stress and work-related burnout.

30. (Larson, Norman, Hughes, & Avey, 2013) U.S.A. Working adults in the mountain states region. Wide range of industries. Data collection web site (www.surveymonkey.com), and physical completed questionnaires. Cross-sectional design.

Leader and follower psychological capital (PsyCap) was measured utilizing the 24-item psychological capital questionnaire -PCQ developed and validated by Luthans et al., 2007.

Person-organization fit was measured utilizing Lee, Mitchell, Sablinski, Burton & Holtom, 2004, 6-item scale.

1002 respondents.

Gender
Females = 61%
Males = 39%

Average Age = 36 years

average years worked in

Results indicate that the insights to understanding person-to-organization fit are enhanced when employees' and leaders' PsyCap levels are similar.

Employees whose PsyCap is more similar to their leaders

| | | | | | |
|-----|---|--|---|---|--|
| | | | <p>Job satisfaction was measured utilizing a 3-item scale adapted from Hackman and Oldham (1980).</p> <p>Employee engagement was measured using the 13-item employee engagement scale developed and utilized by May, Gilson & Harter, 2004.</p> | <p>organization = 6years</p> <p>Major Ethnicity</p> <p>White/Caucasian = 73%</p> | <p>have a higher level of engagement with their organization</p> <p>Employees whose PsyCap is more similar to their leaders have a higher perceived value of job satisfaction.</p> |
| 31. | (Nigah, Davis, & Hurrell, 2012) | <p>United Kingdom. Division of an international professional services organization that delivers suitable, lasting employment programs to people who are long-term unemployed, those with health conditions, and single parents.</p> | <p>Online e-mail questionnaires.</p> <p>Satisfaction With Buddy was measured by a four-item scale which was an adapted version of the "Satisfaction With Mentor" scale by Ragins and Cotton, 1999.</p> <p>Work Engagement was measured using the shortened 9-item version of the 17-Item UWES by Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002.</p> <p>Psychological Capital Questionnaire (PCQ), 24-item developed by Luthans, Avolio, Avey, & Norman, 2007.</p> | <p>78 surveys - graduate employees were returned of 188 sent out.</p> <p>Gender</p> <p>Female = 45 (58%)</p> <p>Male = 33 (42%)</p> <p>Age in their 20s = 74%</p> <p>Average Organizational Tenure = 7 months</p> | <p>PsyCap fully mediates the positive relationship between Satisfaction with Buddy and WE.</p> |
| 32. | (Laschinger, Grau, Finegan, & Wilk, 2012) | <p>Canada. New graduate nurses working in acute care hospitals in Ontario. Registry list of practicing nurses.</p> | <p>Descriptive correlational design</p> <p>Job demands were measured by the workload subscale of the Areas of Worklife Scale – AWS by Leiter & Maslach, 2004 and the Negative Acts Questionnaire-Revised (NAQ-R) by Einarsen & Hoel, 2001. The scale consists of 22 items that tap negative behaviours.</p> <p>Job resources were measured by the control subscale of the AWS by Leiter & Maslach, 2004 and the Practice Environment Scale - PES by Lake, 2002. The control subscale of the AWS consists of five items whilst the PES assesses nurses' perceptions of professional practice environments by measuring five stable factors: (1) nurse participation, (2) nursing foundations for</p> | <p>420 newly graduated nurses.</p> <p>Female = (95%).</p> <p>Average Age = 27.24years</p> <p>Years of experience = 2.3 years</p> | <p>In the final model, job demands (workload and bullying) predicted burnout and, subsequently, poor mental health. Job resources (supportive practice environment and control) predicted work engagement and, subsequently, lower turnover intentions.</p> <p>Burnout also was a significant predictor of</p> |

quality of care, (3) nurse manager leadership, (4) staffing adequacy, and (5) nurse-physician collaboration. 31-items were rated.

Personal resources were measured using the PsyCap Questionnaire – PCQ by Luthans et al., 2007.

Burnout was measured by the emotional exhaustion subscale of the Maslach Burnout Scale-General Survey by Schaufeli, Leiter, Maslach, & Jackson, 1996. The subscale consists of five items .

Engagement was assessed with the 9-item version of the (UWES-9) which measures the three components of work engagement: vigour, dedication, and absorption by Schaufeli et al., 2002.

Mental health was measured by the Mental Health Index-5 (MHI-5) scale from the Short Form-36 Health Survey (SF-36) by Ware, Snow, & Kosinski, 2000. The MHI-5 taps the presence of depressive symptoms and consists of five items rated on a 6-point Likert scale.

Turnover intentions were measured with a 3-item tool from Kelloway et al. (1999).

turnover intent (a crossover effect).

Furthermore, personal resources (psychological capital) significantly influenced both burnout and WE.

The model suggests that managerial strategies targeted at specific job demands and resources can create workplace environments that promote WE and prevents burnout to support the retention and well-being of the new graduate nurse population.

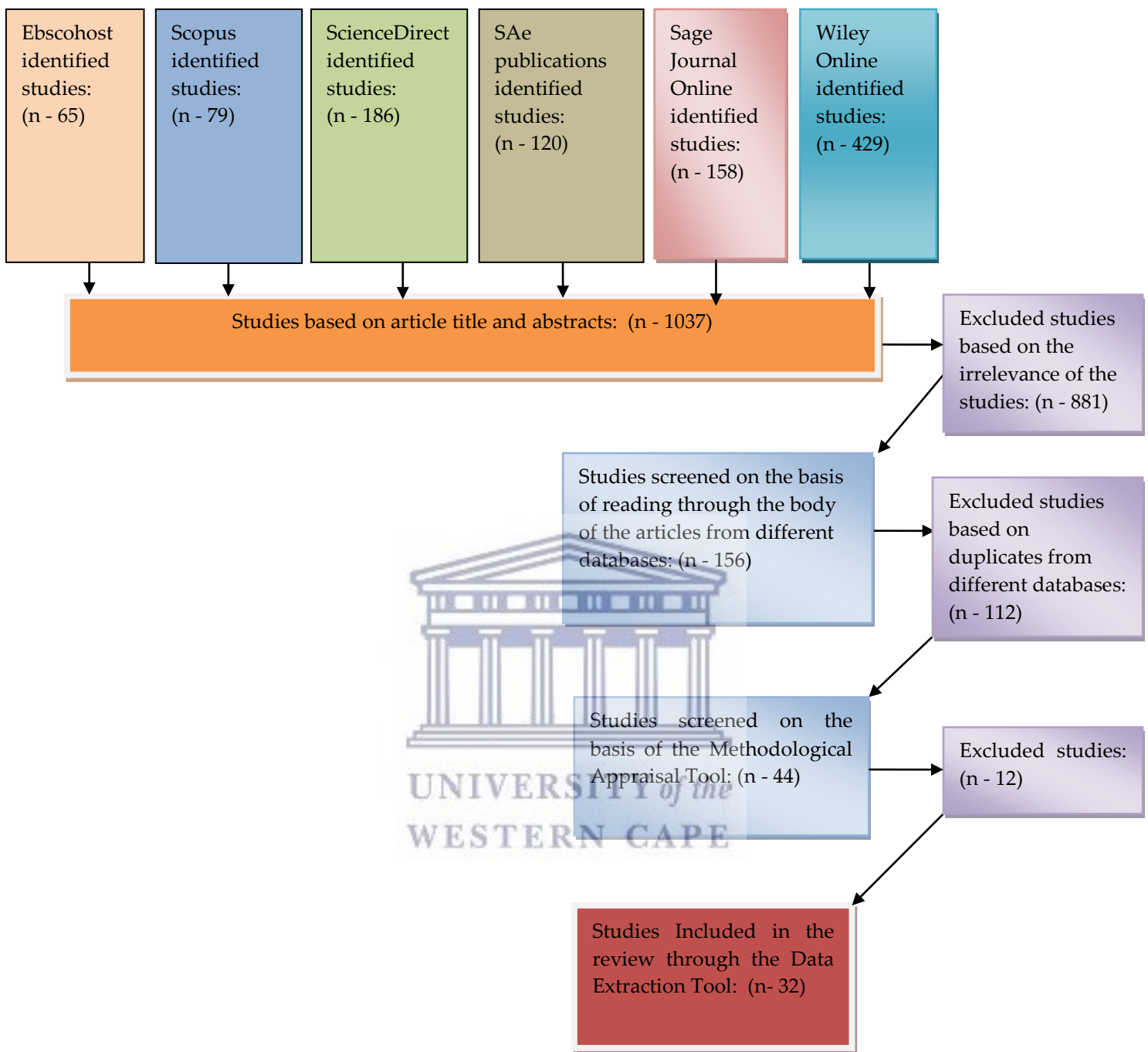


Figure 2.2: Flow chart for screening of studies: Psychological capital and Work engagement

2.4.11 Results

Figure 2.2 summarizes the results that were obtained for the different studies that were finally included in the review. The Methodological Appraisal Instrument was used to produce the final set of included studies. 32 studies finally resulted from the use of the methodological appraisal section of the review. The criteria that were used in the methodological quality assessment instrument included sampling method used, response rate, measuring tools, sources of data used, whether psychological capital was looked at in the study and whether the relationship between psychological capital and work engagement were considered. Of the 44 articles that formed part of the methodological appraisal, nine reached the desired outcome in the 'good' category in the 67 – 100% range, whilst 23 reached the 'satisfactory' category in the 34 – 66% range. 12 articles were excluded from the review because two fell into the 'bad' category whilst 6 studies were reviews and four studies not inaccessible. Therefore, only 32 studies scaled through and were included in the final review. Therefore, of the 1 037 articles obtained from the search engines, only 32 articles met with the reviewers' inclusion criteria. These 32 studies were further and extensively reviewed in Table 2.6 the Data Extraction Tool.

2.4.11.1 Overview of reviewed studies

Several designs and sampling methods were used for the 32 studies that were reviewed. Most studies utilised a non-probability convenience sampling, cross-sectional survey snowballing design. Seven studies used longitudinal designs that lagged for months and even years and another a quasi-experimental pre-test, post-test design with a control group. Few of the studies did not indicate the type of design used.

Of the 32 studies, two was conducted in Romania (Karatepe & Karadas, 2015; Virga & Paveloni, 2015), three in South Africa (De Waal & Pienaar, 2013; Görgens-

Ekermans & Herbert, 2013; Simons & Buitendach, 2013), two in the United Kingdom (Bonner, 2016; Nigah et al., 2012), three in the United States of America (Barnes et al., 2014; Larson et al., 2013; Luthans et al., 2016), two in Italy (Alessandri et al., 2015; Mazzetti et al., 2016), one in Pakistan (Adil & Kamal, 2016), two in European countries (Hicks & Knies, 2015; Vogt et al., 2015), one in Taiwan (Chen, 2015), 1 in India (Chaurasia & Shukla, 2014), 1 in Hong Kong (Siu et al., 2014), four in Korea (Joo et al., 2016; Min et al., 2015; Paek et al., 2015; You, 2016), one in Iran (Karatepe & Talebzadeh, 2016), two in Canada (Boamah & Laschinger, 2014; Laschinger et al., 2012), one in China (Zhong et al., 2016), one in Indonesia (Shaleh et al., 2015), two in the Philippines (Datu et al., 2016; Datu & Valdez, 2016), whilst three articles did not state the countries in which the studies were carried out.

The participants used for the study ranged between high school students (Datu et al., 2016; Datu & Valdez, 2016), university workers and students (Adil & Kamal, 2016; Luthans et al., 2016; Shaleh & Azwar, 2015; Siu et al., 2014; You, 2016), to call center employees (Simons & Buitendach, 2013), hotel employees (Karatepe & Karadas, 2015; Min et al., 2015; Paek et al., 2015), telecom company (Chen, 2015), employees in a chemical factory (De Waal & Pienaar, 2013), health care professionals (Boamah & Laschinger, 2014; Bonner, 2016; Laschinger et al., 2012; Wingerden et al., 2016), airline company (Karatepe & Talebzadeh, 2016) and various multifaceted industries (Alessandri et al., 2015; Chaurasia & Shukla, 2014; Hicks & Knies, 2015; Joo et al., 2016; Mazzetti et al., 2016; Virga & Paveloni, 2015; Vogt et al., 2015; Zhong et al., 2016). Four of the studies (Larson et al., 2013; Malinowski & Lim, 2015; Nigah et al., 2012; Şahin et al., 2014) used the data collection sites on the internet to source for their information.

2.4.12 Conceptualizations & measures of assessment

Psychological Capital

Most of the studies considered PsyCap on the theoretical framework of (Luthans et al., 2007). Out of the 32 articles selected for review, five articles considered psychological capital using the 24 item-four dimensional measure by (Luthans et al., 2007), whilst 18 used PCQ-24 items by (Luthans et al., 2007), two used the 12-item PsyCap by (Luthans, 2002; Luthans et al., 2007). One of the studies assessed PsyCap with 24 items which included four items of Self-efficacy by (Schwarzer & Jerusalem, 1995), four items of Optimism by (Luthans et al., 2007), Hope with the six items of (Luthans et al., 2007), and resilience with the five items by (Block & Kremen, 1996). Another study used Hope items by (Snyder et al., 1996), Optimism items by (Scheier & Carver, 1985), Self-efficacy items by (Parker, 1998) and resilience items by (Wagnild & Young, 1993). PsyCap was assessed with a 50-item scale which included situational hope by (Snyder et al., 1996), situational optimism by (Scheier & Carver, 1985), resilience by (Block & Kremen, 1996) and (Wagnild & Young, 1993), whilst self-efficacy was assessed by (Parker, 1998). A study was measured by 24 items of the PCQ but because of the low reliability in the original in the Optimism and Resilience dimensions, resiliency was measured with four items by (Siu et al., 2009) which was similar to the original PCQ by (Luthans et al., 2007), four positive items from (Scheier, Carver, & Bridges, 1994) for the Optimism dimension were used, four items from the (Snyder, Harris, et al., 1991) was used for the hope scale and four items from the (Schwarzer, Bäßler, Kwiatek, Schröder, & Zhang, 1997) - Generalized Self-efficacy Scale was also used to assess self-efficacy. PsyCap was measured with the PCQ-17 items by Yoo (2004) developed from the PCQ scale of (Luthans et al., 2007). Another 12 items was adapted from (Luthans et al., 2007)

Work Engagement

Most of the studies considered employee work engagement on the theoretical framework of (Kahn, 1990). A few others conceptualized WE on the Conservation of Resources Theory (COR) theory and the Job Demands – Resources (JD-R) model.

Out of the 32 articles, one article used the measuring dimensions (UWES-9) by (Schaufeli & Bakker, 2004), five used the UWES-17 by (Schaufeli & Bakker, 2003, 2004, Schaufeli et al., 2006, 2002), 13 used the UWES-9 by (Schaufeli et al., 2006), employee engagement was assessed with a 13-item scale by (May, Gilson, & Harter, 2004), two used UWES-9 from the UWES-17 scale by (Schaufeli et al., 2002), one used 11 items by (Schaufeli & Bakker, 2003), one used the UWES-9 by Schaufeli, Dijkstra and Shi (2014), employee engagement was assessed by a coupled questionnaire by (Rich et al., 2010; Saks, 2006). The short Chinese version (9 items) of the UWES was also adapted. Engagement was assessed with the 20-item Engagement Scale by He (2009). Student engagement was assessed with three measures from (Carle, Jaffee, Vaughan, & Eder, 2009). Another used only two dimensions (vigour and dedication) of the UWES by (Schaufeli et al., 2006). Two studies on Academic engagement was assessed with a 20-item scale by (Skinner, Kindermann, & Furrer, 2009) whilst one added the cognitive engagement subscale by (Wolters, 2004).

2.4.13 Discussion

This systematic review was undertaken to examine the relationships between psychological capital (PsyCap) and work engagement (WE). The review focused on studies conducted on all available published studies between 1990 and 2016. Out of the 32 studies that met the inclusion criteria only three were conducted in Africa - South Africa in particular. It is important that publishing studies on these constructs be intensified in the African context as its heterogeneous population may bring to limelight other issues that have not been previously indicated.

It should also be noted that although most of the studies utilised a non-probability sampling technique which has its apparent demerits, seven studies used a longitudinal design and another a quasi-experimental pre-test, post-test design with a control group. These kinds of study designs allow for causal effects and deductions to be made between the aforementioned constructs.

Although most of the studies verified that PsyCap boosts WE, some of the studies pointed out some salient issues that needs noting. Karatepe and Karadas (2015); Simons and Buitendach (2013) suggest that although PsyCap fosters WE, the optimism dimension of the Pscap seemed to be the best indicator of PsyCap as it displayed a higher, more significant relationship with WE and its dimensions. Additionally, Karatepe and Karadas (2015) indicated that WE mediated the relationship between Pscap and Job, Career and Life satisfaction of employees. Şahin et al. (2014) indicated that PsyCap did not increase WE among the management cadre. A South African longitudinal study reported that there was no significant effect of PsyCap on WE over a period of time (De Waal & Pienaar, 2013). This result clearly stands in opposition to most results obtained from previous studies and may probably be associated with the nature of work performed in the organization. However, it is essential to carry out a more extensive research on the effect of PsyCap on WE especially on its promotion and sustenance over a long period of time. Research implies that PsyCap fosters WE in the short-term, but it may not work in the long-term situation.

Barnes et al. (2014); De Waal and Pienaar, (2013) also suggested that engaged employees were able to create a PsyCap. This statement is probable because WE and PsyCap are both positive behaviours that can be developed. However, this reciprocal relationship needs further testing to validate this claim. Chaurasia and Shukla (2014); Larson et al. (2013) pointed out that WE is ensured at a workplace when

similar level of PsyCap between leaders and their followers are attained. This is confirmed by Chen, (2015) that suggests a significant positive relationship between a leaders' PsyCap and engagement through the mediation of followers' PsyCap.

Many of the included studies, however, confirmed the four factor dimension of the PsyCap and stated that the combined, integrative measure of the PsyCap was more predictive of WE than the individual dimensions of the PsyCap.

2.4.14 Conclusion

Conclusively, this systematic review has assisted in buttressing that indeed PsyCap would promote and sustain employee engagement in today's organizations (Bakker, Gierveld, & Van Rijswijk, 2006), however, these results further prove that PsyCap alone may not be sufficient to achieve the goal. It is paramount also to ensure that more studies are conducted and published in Africa to understand whether the African terrain would shed further light on fostering work engagement in the workplace. Furthermore, the reciprocal nature of the PsyCap and work engagement needs to be further explored. This review was also useful in ascertaining the relationship between PsyCap and academic engagement.

Academic engagement has been indicated to be the degree to which absorption, dedication, and vigour are upheld by students when engaged in academic activities (Siu et al., 2014) and the intensity with which students vigorously take on academic tasks and are happy when achieving such tasks (Datu & Valdez, 2016). Optimal student engagement have been posited when academic PsyCap is ensured (Datu et al., 2016; Luthans et al., 2016; Siu et al., 2014). School administrators, counsellors, school psychologists and teachers are therefore encouraged to help nurture positive psychological resources such as PsyCap amongst their students (Datu & Valdez,

2016) because when students are academically engaged, they exceed their own expectations and are rated as brilliant learners.

2.5 THE RELATIONSHIP BETWEEN PSYCHOLOGICAL CLIMATE AND EMPLOYEE ENGAGEMENT: A SYSTEMATIC REVIEW

2.5.1 Introduction

Employees are very important to the sustainability and productiveness of an organization and they want to be treated as such. Employees desire to be treated as the most crucial, valuable and indispensable resource in the organization. When employees perceive that they are not treated with respect and not treated as an integral part of the organization, there is likely to be a dissonance between what the employees do and what they should do.

Employees perceive the work climate conditions in an organization based on the human resource management (HRM) approaches, policies and rules that has been established and is used in that workplace (Chaudhary, 2014). The work climate in an organization creates a crucial atmosphere which influences employees and the organization as a whole (Kuenzi & Schminke, 2009) and definitely plays a significant part in moulding and informing employees' behaviour in a workplace climate (Gagnon, Paquet, Courcy, & Parker, 2009). It is therefore of utmost importance that the organization's environmental climate and employees' perception of the same be identified and studied.

2.5.2 Work Climate

The work climate concept was officially introduced into the academic literature in the 1960s. Hellriegel and Slocum (1974); Schneider (1975) proposed that the significance of work climate must not be underestimated for both the organization

and the shaping of employees behaviour. Several attempts have thus been made over the years to develop a proper definition and measurement conceptualization for the work climate construct (Gagnon et al., 2009). Inkson, Pugh, and Hickson (1970) define the work place climate as an objective perception of the structure of a workplace which is not informed by employees in the workplace.

Verbeke, Volgering, and Hessels (1998) categorised the workplace climate into four conceptual categories. They are: structural, perceptual, interactional and cultural climate patterns. The structural pattern suggests that the perceptions of employees are influenced based on the daily objective exposures they have to the workplace environment whilst the perceptual pattern identifies the impact of psychological processes in producing individual perceptions rather than organizational perceptions of the work climate. This climate can be referred to as psychological work climate. The interactional pattern proposes that organizational work climate originates from the relationships that exist among the employees in a workplace such that employees perception of a work climate is moulded based on the day to day interactions amongst the employees. The cultural pattern on the other hand inculcates the history of the organization into the work climate perceptions such that employees perceptions of the workplace climate are influenced by the history, objectives and values of the organization which also interacts with the culture of the organization (Gagnon et al., 2009).

Another four-dimensional model of climate perceptions was identified by James et al., as: i) role stress and lack of harmony; (ii) job challenge and autonomy; (iii) leadership facilitation and support; and (iv) work-group cooperation, friendliness and warmth (as cited by Kataria, Garg, & Rastogi, 2013b).

Several kinds of climate at the workplace have been identified by the academic literature. Competitive psychological climate has been identified as “the degree to which employees perceive organizational rewards to be contingent on comparisons of their performance” (Brown, Cron, & Slocum, 1998, p. 89). Organizational work climate has been defined by Schneider and Reichers (1983) as a variety of commonly shared ideas on an organization’s expectations, rules, policies, procedures and rewards whilst Psychological climate has been described as the employee’s personal perception of the atmosphere in the workplace and how this impacts on the person (James & James, 1989).

Chaudhary, Rangnekar and Barua (2014) suggest that it is mostly the human resource management (HRM) policies and practices that exist in an organization that inform employees’ climate perceptions. These authors posit that the Human Resource Development (HRD) climate is an essential ingredient in an organizational climate as it portrays employee perceptions in relation to the development atmosphere in the workplace. This is typified by how employees are treated, trained, communicated with, how employee skills and capacities are recognized, supportive practices, their strengths and weaknesses and the general atmosphere of autonomy and trust that subsists in the organization (Rao & Abraham, 1986).

2.5.3 Delineation of Psychological Climate (PsyClim)

Research has categorized and conceptualized the climate of an organization based on two levels: the organizational level and the individual level. The organizational level which has been identified as the Organizational Climate are the shared views and perceptions of the employees regarding the policies and procedures of an organization, whilst the individual level which has been identified as the Psychological Climate captures the individualistic perception of employees regarding their organizational environment (Brown & Leigh, 1996). Although it may

be quite impossible to get a perfect agreement among all the employees as to their perception of the processes, structures and procedures that exists in an organization, organizational climate still promotes the most shared sentiments by the employees in a workplace whilst psychological climate refer to personal psychological images that have been formed by individuals in a workplace (Chaudhary, 2014). It is crucial in today's workplace for the management to be sensitive to the climates in the organization so that the right atmosphere can be created and sustained.

The average perceptions of employees in an organization has been referred to by academic literature as the climate quality (Van Vianen, De Pater, Bechtoldt, & Evers, 2011) whilst the level of variability or consensus that exists within an organization regarding climate perceptions is referred to as the Climate strength (Dawson, González-romá, Davis, & West, 2008; Lindell & Brandt, 2000). The higher the consensus of climate perceptions amongst the employees at a workplace, the stronger the climate strength would be and vice-versa. It is highly advantageous to the team or the organization as a whole when high climate strengths are achieved. Furthermore, Chaudhary (2014) suggests when the climate strength is added to the climate quality, it would represent the organizational climate in a work environment.

Psychological climate is a unique, individual characteristic of employees which is directed towards the interpretation of organizational procedures, policies, practices, rewards, benefits and even corrections and disciplines (Brown & Leigh, 1996; Hellriegel & Slocum, 1974; Parker et al., 2003). Chaudhary (2014) identifies the PsyClim construct as the Psychological Human Resource Development (HRD) climate. When employees' perceive their workplace environment as safe, purposeful, creative and ingenious, they feel their wellbeing is properly catered for and this feeling increases their drive and energies towards making this work (Kahn, 1990).

One of the major influences on the PsyClim perceptions of employees are the emotions felt by employees (James et al., 2008). Emotions play a crucial role in that it informs excitement and interest in an activity or situation. It also increases or reduces attention, stirs up the willingness or need to act or not and impacts on how people manage challenging situations and adapt to new environments or relationships (Fredrickson, 2001). Positive emotions impact significantly on a person's behaviour and attitude. It is therefore important for employees to be favourably disposed towards the workplace because that favourable disposition will help them to be psychologically and physically involved, connect and be committed to their work and the organization. This positive emotional disposition will aid employees in driving organizational goals and vision and to increase engagement, productivity and profitability at the workplace.

2.5.4 Conceptualizing the Psychological Climate

This study conceptualized PsyClim on the definitions and conceptualization of Brown and Leigh (1996) based on Kahn's recommendations. Brown and Leigh (1996) have described the PsyClim as multidimensional in nature with six positive psychological dimensions that produce a supportive and fulfilling workplace climate. These dimensions are: supportive management, role-clarity, the capacity to make worthwhile, meaningful contributions towards organizational success, adequate recognition by the management, freedom for self-expression and sufficient levels of challenge at work.

Supportive management

When a supportive management style is cultivated in an organization, employees feel free and bold to make experiments with regards to their tasks and roles without being afraid of retribution. This confidence to try out new methods and skills give employees a level of control over their work. This enables employees to be creative

and ingenious in their achievement of company's vision and goals and to innovatively tackle challenging situations and tasks. The freedom and sense of trust attached to a supportive system fosters positive perceptions about the work place and subsequently increases productivity and performance (Deci & Ryan, 1985; Kahn, 1990). Contrastingly, when the management is uncompromising and rigid over techniques and methods used in accomplishing organizational objectives, the employees will feel that the management does not have confidence in them to carry out their duties effectively. When managers introduce and expect strictly regulated practices and behaviour at the workplace, it disallows employee authenticity (Brown & Leigh, 1996) and creativity. It is important that an environment of harmony, trust and openness be inculcated in the workplace by the management. Saks (2006) indicates that when employees trust their working environment, their authentic, genuine personalities emerge which in turn facilitates employee engagement.

Role clarity

Employees feel unsafe and they are likely to be disengaged from their duties at work when their work roles and job expectations are not clearly spelt out or when they are inconsistent. When employees are confused and ignorant regarding their roles and management's expectations from them, they might be hesitant in carrying out their duties. Contrastingly, when clear, consistent work expectations are stated and created by the management, employees feel psychologically safe and involved in their task roles (Brown & Leigh, 1996; Chaudhary et al., 2014; Kahn, 1990; Mendes & Stander, 2011). Essentially, Hassan and Rohrbaugh, (2011) notes that role ambiguity which is the rate at which a particular work-role lacks well-detailed, well-stated responsibilities gives room for employees' disengagement and demotivation.

Self-expression

Every individual desires to be free to express himself or herself but if and when employees perceive that they will incur management or organizational reprisals for communicating or asserting their personality or individuality at their roles, they would most probably avoid their duties and psychologically disengage from their duties and work-roles (Efraty & Sirgy, 1990; Gruman & Saks, 2011). However, when employees are permitted to express their individuality freely at their work-roles, commitment, creativity and engagement is achieved (Brown & Leigh, 1996; Kahn, 1990; Kataria, Garg, & Rastogi, 2013a). The privilege and opportunity for self-expression at the workplace in an employee's work roles accentuates the emergence of important self-concepts that allows employees to utilize their uniqueness, their talents and their skills (Kataria et al., 2013a; Olivier & Rothmann, 2007).

Meaningfulness of contribution

When employees perceive that their contribution at the workplace is termed meaningful and of great importance, commitment and identification with work-roles would be enhanced. There is a feeling of self-achievement, self-respect and self-confidence that is generated when employees perceive that their duties significantly impacts on organizational outcomes (Brown & Leigh, 1996; Garg & Rastogi, 2006; Iun & Huang, 2007; Kahn, 1990; Velnampy, 2008). Employees' sense of fulfilment at the task will further stir up the desire and need to be more involved, creative and engaged at their work-roles. Mendes and Stander, (2011) indicated that employee perceptions of their increased levels of meaningfulness and contribution at work would positively facilitate WE. As such, positive emotions that lead to enthusiasm at work-roles are activated when psychological meaningfulness is perceived.

Recognition

Every individual desires a level of recognition and appreciation when they deliver on their job. As such, when employees perceive that their contributions, efforts and sacrifices are appropriately recognised and appreciated, they are motivated to make more contributions and sacrifices (Ali & Ahmed, 2009; Brown & Leigh, 1996; Kahn, 1990). Intrinsic motivation is supported and reinforced when employees have a perception that they are recognized by the organization (Danish & Usman, 2010; Vansteenkiste, 2005). Contrarily, the opposite obtains when employees feel their worth and contributions at the workplace is unrecognized (Maslach et al., 2001). Periodic formal and informal employee recognition should be initiated and sustained by the management such that extra efforts, creativity and contributions by employees are acknowledged and celebrated. Saks (2006) confirms that this action fosters increased commitment and loyalty to the organization.

Challenge

Work roles tend to be boring when it is not associated to a certain level of challenge or opposition. Room for personal improvement is initiated when tasks are challenging (Branham, 2005). Ingenuity, bright ideas and skills are needed to solve work issues and meet targets. Employees are emotionally, cognitively and physically involved with their work when work is challenging (Brown & Leigh, 1996; Carmeli, Cohen-Meitar, & Elizur, 2007; Kahn, 1990). Assignments and tasks allocated to employees are exciting to tackle when a sufficient level of challenge is attached to it. Coetzer and Rothmann (2007); Ryan and Deci (2000) emphasize the import of challenging work roles. The authors indicate that employees tend to be more engaged at work when they perceive their jobs as been challenging and diversified.

2.5.5 Work Engagement (WE) and Psychological Climate (PsyClim)

Work engagement has been defined as a “positive, fulfilling, affective motivational state of mind that is characterized by vigour, dedication, and absorption” (Schaufeli, Salanova, Gonzales-Roma, & Bakker, 2002, p. 74). The three sub dimensions of WE are: Vigour (employees’ high dimensions of positively induced and channelled energy and mental hardiness at work), Dedication (employees’ willingness to enthusiastically devote ample time, effort and energy towards meaningful work), and Absorption (employees’ cognitive involvement, immersion and attention at work such that it is quite difficult to disengage oneself from work being done). Kataria, Garg, and Rastogi (2013a) and Shuck, Jr, and Rocco (2011) affirm that WE depicts a long-term cognitive engrossment at work which supersedes other positive organizational outcomes such as commitment, job satisfaction and job involvement. This is because WE involves a continuous, energized, motivated employee state of mind which is poised to expedite organizational goals and plans (Andrew & Sofian, 2011). The Towers Perrin HR Services report stated that employees that are engaged at the workplace add unrestricted efforts, energy, extra time and intellectual skill and capacity (Towers Perrin, 2003). As such, the WE construct presents a much more holistic framework of an employees’ state of being involved at the workplace. Wollard and Shuck (2011) are of the opinion that when employees are engaged, they can further cultivate the PsyClim within the organization through their positive psychological attitudes, experiences and emotions.

Positively channelled perceptions of PsyClim has been touted to lead to organizational commitment, productivity, job satisfaction, OCBs, employee performance and motivation whilst reducing employee turnover and absenteeism (Biswas, 2012; Brown & Leigh, 1996; Harter, 2001; Parker et al., 2003; Shamian, O’Brien-Pallas, Thomson, Alksnis, & Steven Kerr, 2003). Furthermore, antisocial workplace behaviours that could be detrimental to WE are curtailed when work

climates are perceived as favourable (Gagnon et al., 2009). Psychological climate studies have observed that employees with positive PsyClim, have their work attitudes and behaviour positively impacted such that they would most probably dedicate more time, energy and effort at work, and are major drivers of positive citizenship behaviours (Biswas & Varma, 2007; Brown & Leigh, 1996; Garner & Hunter, 2013) although Alfes, Shantz, Truss and Soane (2013) have criticized these views as not properly accommodating an inclusive dimension of a person's personalities (Kataria et al., 2013b).

Employee engagement has been established as a very significant construct that fosters quite a number of positive organizational and individual consequences such as job performance, organizational growth and profitability, job satisfaction amongst others (Mahon, Taylor, & Boyatzis, 2014; Rich et al., 2010; Saks, 2006). Organizations are progressively considering engagement as being competitively advantageous to productivity and profitability at the workplace and talent optimization (Kular et al., 2008; Macey & Schneider, 2008)

2.5.6 Work Engagement and Workaholism

Workaholism has been identified as significantly different from WE in that workaholics are always in a dire need to excessively and compulsively commit themselves to work. Workaholics feel a compulsion and inner drive to keep working and feel guilty and uneasy when not working (Schaufeli et al., 2008). The incessant, uncontrollable need to work at all times facilitates employee burnout and not necessarily increased productivity (Schaufeli et al., 2008; Van Beek, Taris, & Schaufeli, 2011). Although some authors have indicated the seemingly merits of workaholism, other authors have agreed that excessive working especially when working extremely above what is expected or included in the employment contract is detrimental and could project negative consequences (Keller, Spurk, Baumeler, &

Hirschi, 2016). Workaholism like alcoholism has been categorised as an addiction rather than a positive attribute (Spence & Robbins, 1992).

2.5.7 A Systematic review of the relationship between psychological climate and work engagement

To the best of the knowledge of the researcher, there had been no systematic review to date that has been conducted on the relationship between psychological climate and work engagement although several studies have highlighted the association between the two constructs. This review therefore sought to bring to limelight salient and inconspicuous issues regarding the relationship between the two constructs.

2.5.8 Rationale for the review

Although few studies in the WE literature have reported and substantiated important, compelling positive links between workplace climate and WE (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Halbesleben, 2010), a good association could not be drawn between the overall WE and the absorption sub dimension with organizational climate because of inadequate number of studies for a meta-analysis (Halbesleben, 2010). Some authors have insisted that although there has been few studies that have been conducted in relation to workplace climate, there is a dire need for more studies to be carried out as there is a sparsity of studies establishing the nature of relationships between workplace climate and WE (Chaudhary et al., 2014; Christian et al., 2011; Macey & Schneider, 2008).

This review therefore brought into emphasis the relationship between psychological climate and work engagement and to understand the nature of relationships that exists among these two constructs.

2.5.9 Aim of the review

The aim of this review was to systematically synthesize every available, published literature regarding psychological climate and work engagement. The review was concerned with establishing an empirical, systematic, comprehensive report on the said constructs. This review focused on published empirical studies conducted from the year 1990 to 2016.

2.5.10 Review Question

What kind of relationships exists between psychological capital and employee engagement in an organization?

2.5.11 Method

2.5.11.1 Terms

The Keywords that were included within the systematic review were: Psychological Climate, Work engagement, Job engagement, Employee engagement and Engagement.



2.5.11.2 Article Search

The articles indexed in eight electronic databases: EBSCOhost Online Research Databases – (Academic Search Complete, Business Source Complete, and PsycARTICLES), ScienceDirect, Wiley Online Library, Scopus, SA ePublications, SAGE Journals Online and Google Scholar. These databases from 1st January 1990 to 31st December, 2016 were utilized in searching for articles. The first seven electronic databases were used for the initial, comprehensive search whilst the Google Scholar was used to compliment the searches in order to locate the complete articles that had been identified by the above listed six search databases. Included in these databases were national and international journals such as Journal of Leadership & Organizational Studies, Journal of Advanced Nursing, Social Behaviour & Personality, Journal of Nursing Management, Australian Journal of Management,

South African Journal of Psychology, The Leadership Quarterly, Journal of Nursing Administration, Journal of Organizational Behaviour, and Journal of Leadership & Organizational Studies.

2.5.11.3 *Inclusion criteria*

Included studies were identified and selected on the basis of their titles, abstract, and keywords. Subsequently, these different literatures were included in the review based on their eligibility. The eligibility criteria were:

- **Publication Date** – Only studies published between 1990 and 2016 were considered as eligible. Pilot searches earlier conducted indicated that there were no studies on Psychological Climate and Work Engagement prior to 1990. This review was carried out in 2017; studies were therefore limited to 2016.
- **Language** – Only studies published in or translated to the English language were considered. Wilson, Lipsey, and Derzon (2003) observed that this is a commonly used concept for systematic reviews in view of the difficulties that could be encountered in translating and replicating the review.
- **Type of studies** – Only studies that considered the relationship between psychological climate and engagement were considered. Articles that included search terms such as psychological climate, engagement, employee engagement, work engagement, job engagement in their titles, abstracts, or body text were included in the review. As the choice of particular words may influence the results of a review, only synonyms of the included constructs were included to further enrich the literature search. Studies which did not refer to such words or focused only on PsyClim or work engagement in itself were excluded.
- **Publication status** - Only peer-reviewed journal articles were included so as to ensure a high level of quality.

- *Study design* - Only experimental studies were included in the review.

2.5.11.4 *Exclusion criteria*

Literature that was excluded from the systematic review included:

- Unpublished studies,
- Studies published prior to 1990 and later than 2016,
- Studies that included other factors impacting employee engagement aside from PsyClim and vice-versa,
- Studies carried out singly on PsyClim or work engagement that did not impact on the other construct.

2.5.11.5 *Study Selection/ Search and Retrieval Process*

This rigorous, extensive search generated 2 027 articles. The titles, abstracts, and keywords of these articles were reviewed out of which 2009 studies were excluded at this stage because they did not meet the eligibility criteria and only 51 articles indicated their relevance to the topic under study. Some of the studies excluded were because they touched on psychological climate only or work engagement only or were impacted by other constructs. Other studies excluded at this stage bordered on the fact that they were conceptual studies or reviews also. Out of 51 articles, only 11 articles were meticulously read as the difference of 40 articles were duplicates from the different databases that were used. 11 articles were finally screened and analysed with the adapted version of the Data Extraction Tool and Methodological Quality Appraisal Tool (Roman & Frantz, 2013). Finally, 3 articles were excluded based on the Data Extraction Tool and Methodological Quality Appraisal Tool and only 8 articles was used for the review

2.5.11.6 Methodological quality appraisal

The methodological quality was assessed using the methodological quality appraisal tool adapted from Roman and Frantz (2013). The methodological quality appraisal tool was used to evaluate the sampling methods, response rate, validity and reliability of the measuring tool and also the data source. A possible inclusion within the review is considered when the methodological quality appraisal score is obtained as satisfactory or good.



Table 2.7

Methodological Quality Appraisal Tool: PSYCLIM & WE

| Articles | Authors | Sampling method: Was it representative of the population intended to the study? | Was a response rate mentioned within the study? (Respond no if response rate is below 60) | Was the measurement tool used valid and reliable? | Was it a primary or secondary data source? | Was Psychological Climate looked at within the study? | Were the relationship /association between Psychological Climate and Work Engagement explored? | Calculation | Total | Comments |
|--|-------------------------------------|--|--|---|--|---|--|-------------|--------|--------------|
| Does Psychological Climate Augment OCBs? The Mediating Role of Work Engagement | (Kataria, Garg, & Rastogi, 2013a) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.3% | Good |
| Resources and time pressure as day-level antecedents of work engagement | (Kuhnel, Sonnentag, & Bledow, 2012) | 0 | 1 | 1 | 1 | 1 | 1 | 5/6*100 | 83.3% | Good |
| Drivers of work engagement: An examination of core self-evaluations and psychological climate among hotel employees | (Lee & Ok, 2015) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Antecedents of organizational engagement: exploring vision, mood and perceived organizational support with emotional | (Mahon, Taylor, & Boyatzis, 2014) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |



intelligence as a moderator

| | | | | | | | | | | |
|---|--|---|---|---|---|---|---|---------|--------|--------------|
| Employee Engagement and Well-Being: A Moderation Model and Implications for Practice | (Shuck & Jr, 2014) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Psychological Climate and Organizational Effectiveness: Role of Work Engagement | (Kataria, Garg, & Rastogi, 2013b) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Linkages Between Racioethnicity, Appraisal Reactions, and Employee Engagement | (Volpone, Avery, & McKay, 2012) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Employee engagement: an examination of antecedent and outcome variables | (Shuck, Jr, & Rocco, 2011) | 0 | 0 | 1 | 1 | 1 | 1 | 4/6*100 | 66.67% | Satisfactory |
| Disentangling the Fairness & Discrimination and Synergy Perspectives on Diversity Climate: Moving the Field Forward | (Dwertmann, Nishii, & Van Knippenberg, 2016) | | | | | | | | | Review |



| | | | | | | | | | | |
|--|-----------------------------------|---|---|---|---|---|---|---------|--------|-----|
| Developing dedicated service employees: Psychological climate for service and internal service as service-oriented resources | (Witt, 2013) | 0 | 0 | 0 | 1 | 1 | 0 | 2/6*100 | 33.33% | Bad |
| Classifying Academically At-Risk First Graders into Engagement Types: Association with Long-Term Achievement Trajectories | (Luo, Hughes, Liew, & Kwok, 2009) | 0 | 0 | 1 | 0 | 1 | 0 | 2/6*100 | 33.33% | Bad |



2.5.11.7 *Data extraction*

An adapted version of the data extraction tool adapted by Roman and Frantz, (2013) was adapted and utilized for the purpose of the review. The data that gathered from the extraction tool included: the author(s) name(s), country/geographical location, study design, participant demographic details, measures used, data on the association that was found and the findings.



Table 2.8

Data Extraction Tool: PSYCLIM & WE

| <i>S/N</i> | <i>Authors</i> | <i>Country/ Geographical Allocation/ Sector/ Participants</i> | <i>Study Design</i> | <i>Instruments used</i> | <i>Sample Size/ Participants</i> | <i>Relationship between Psychological Climate and Work Engagement and other constructs</i> |
|------------|------------------|---|-------------------------|---|--|--|
| 1. | (Lee & Ok, 2015) | United States. Hotel line-employees and managers. | Convenience sampling | <p>Employee engagement was measured by Schaufeli and Bakker's (2003) 9-item, shortened version of the Utrecht Work and Engagement Scale (UWES-9). It assessed the 3 underlying dimensions of employee engagement which is vigour, dedication, and absorption.</p> <p>Core Self-evaluation (CSEs) were measured using Judge et al.'s (2003) Core-Self Evaluation Scale (CSES). This scale comprised 12 items that measured the four underlying components of CSE including self-esteem, generalized self-efficacy, locus of control, and neuroticism (emotional stability).</p> <p>Psychological Climate (PSC) was measured with Amenumey and Lockwood's (2008) 13-item scale which consisted of four subscales of PSC: customer orientation of the management, managerial support, internal service, and information/communication.</p> | <p>394 out of 406 hotel line-employees and managers.</p> <p>Gender Female = 64.4% (n=254) Male = 35.6% (n=140)</p> <p>Age of respondents 20 - 29 years = 50.3% (n = 198) 30 - 39 years = 23.2% (n = 91) Above 39 = 26.5% (n=105)</p> <p>Work Experience < a year = 57.9% (n = 228) > 3 years = 42.1% (n = 165)</p> <p>Full time employees = 86.1% (n=339)</p> <p>Departments Front Office = 41.4% (n = 163) Food & beverage = 18.0% (n= 71) Sales = 27.6% (n = 109) Administrative = 6.5% (n = 26)</p> <p>Line employees = 56.1% (n= 221) Managers = 43.9% (n = 173)</p> | <p>The 4 components of psychological climate (i.e., customer orientation of the management, managerial support for service, internal service, and information-sharing communication) were positively associated with employee engagement. PsyClim is therefore a significant predictor of engagement.</p> <p>Results also hypothesized that CSEs and PsyClim interact to increase employee engagement.</p> |
| 2. | (Mahon et al., | United States, | Web-based survey | Emotional Intelligence (EI) was measured | 231 team members from two | Psychological climate factors |

| | | | | | |
|-----------------------|--|-------------------------------------|---|--|---|
| 2014) | Data were collected from one for-profit public company and one not-for-profit educational institution, both headquartered in a Midwestern state. | administered over a 1 month period. | <p>using a 72 item survey. The EI variables were derived from the emotional and social competence inventory (ESCI) developed by Boyatzis and Goleman, 2007. The survey items measure 12 distinct emotional and social competencies. Only EI scales were used for the current study.</p> <p>The climate factors (Psychological climate) were assessed with the PNEA Survey developed by Boyatzis, 2008.</p> <p>The Percieved Organizational Support (POS) scale contained 3 items adapted from Saks' (2006) scale.</p> <p>Engagement was measured with 4 items from Saks (2006) engagement instrument.</p> | <p>organizations.³</p> <p>Non-profit Org. Gender Female = 75% Male = 25%</p> <p>Mean Job Tenure = 2.73 years</p> <p>Mean Work Experience = 3.93 years</p> <p>Profit making Org. Gender Female = 35% Male = 65%</p> <p>Mean Job Tenure = 2.32 years</p> <p>Mean Work Experience = 3.46 years</p> | (i.e., shared personal vision and shared positive mood) were related to engagement. Shared vision strengthens the level of engagement although; shared positive mood had the strongest direct association on organizational engagement. |
| 3. (Shuck & Jr, 2014) | United States, Canada, and Japan. Health care employees. | Internet-based self-report survey | <p>Employee engagement was measured using the 18-item Job Engagement Scale (JES; Rich et al., 2010). The JES is a three-factor scale (cognitive, emotional, and physical engagement).</p> <p>Psychological workplace climate was measured using the 21-item Psychological Climate Measure (PCM) by Brown & Leigh, 1996. The PCM consists of six subscales: supportive management, role clarity, contribution, recognition, self-expression, and challenge.</p> <p>Overall well-being was operationalized as including the variables emotional</p> | <p>216 health care employees</p> <p>Countries United States = 179 Canada = 22 Japan = 7</p> <p>Gender Female = Male =</p> <p>Age Group 21 – 29 years = 71 30 – 39 years = 73 40 – 49 years = 33</p> | <p>Results suggested that psychological workplace climate was significantly related to each outcome variable with engagement moderating the relationship between workplace climate and each of the four dependent variables.</p> <p>Results provide support that psychological climate affects a person beyond issues of productivity and turnover.</p> |

exhaustion, depersonalization, personal accomplishment and psychological well-being.

Emotional exhaustion was measured using the three-item Emotional Exhaustion Scale (EES) by Iverson et al., 1998.

Depersonalization was measured using a modified version of the three-item Depersonalization Scale (DS) by Iverson et al., 1998.

Personal accomplishment was measured using the three-item Personal Accomplishment Scale (PAS) by Iverson et al., 1998.

Psychological well-being was measured using the Schwartz Outcome Scale-10 (SOS-10) by Blais et al., 1999.

Work Tenure
2 – 5 years = 69
> 10 years = 60

Management/leadership positions = 11.7% (25)

Non-leadership/frontline team member positions = 82.87% (179)

Full-Time workers = 79.3% (n=172)

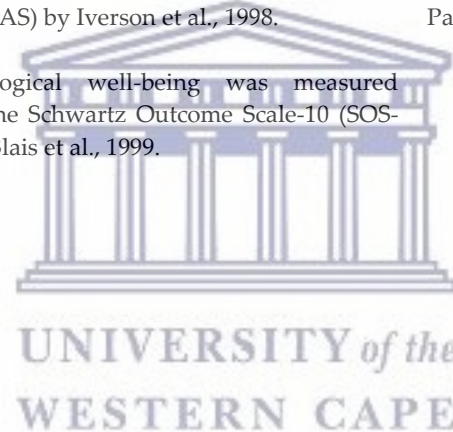
Part-Time workers = 20.7% (n=44)

For each of the four models, engagement had a significant interaction effect with PsyClim. When engagement levels were high, the relationship between psychological workplace climate and personal accomplishment and psychological workplace climate and psychological well-being were stronger.

These findings suggest that engagement moderated the negative relation between psychological climate and emotional exhaustion and depersonalization.

When employees perceive their work environment as positive, they have the ability to draw from individual level resources which is not readily available when working in negative PsyClim.

WE fully mediates the relationship between supportive management, self-expression, and job-challenge, and partially mediates clarity, recognition, and contribution with OCBs.



4. (Kataria et al., 2013a) India. Indian sample of working population of IT professionals in organizations across National Capital Region (NCR). Survey-based, random selection and distribution. IT organizations was selected made through the Yellow Pages

Psychological climate was measured with a 21-item scale developed by Brown and Leigh (1996). The scale consists of six subscales: supportive management, role clarity, contribution, recognition, self-expression, and challenge.

13 of the 25 organizations participated in the survey. A total of 278 out of 450 questionnaires were obtained.

Gender
Female = 39%
Male = 61%

| | | | | | |
|----|-------------------------|---|--|---|---|
| | | Directory. | Work Engagement was assessed with a extensively validated nine-item Utrecht Work Engagement Scale (UWES-9) by Schaufeli, Bakker, and Salanova (2006). Organizational Citizenship Behaviours (OCB) was measured with Podsakoff and MacKenzie's (1989) 15-item, & 7-point OCBQ measure. The scale consists of five dimensions—altruism, courtesy, civic virtue, conscientiousness, and sportsmanship. | Average Age of Participants = 32.8 years Average Work Experience = 9.42years | PsyClim. (e.g., supportive management, role clarity, job challenge, recognition, and self-expression) significantly contributes to WE and higher engagement of employees encourage them to behave in citizenship ways in organizations. |
| 5. | (Kataria et al., 2013b) | India. Employees - executives/supervisory level employees in different service organizations | Not stated Psychological climate was measured using the Psychological Climate Measure developed by Brown and Leigh (1996). The scale consists of six subscales, namely, supportive management, role-clarity, contribution, recognition, self-expression and challenge, and includes a total of 21-items. Work engagement was measured using the Utrecht Work Engagement Scale (UWES-9) developed by Schaufeli <i>et al.</i> (2006). The scale consists of 9-items and measures three sub-dimensions of engagement, namely, Vigour. Organizational Effectiveness was measured with an 8-item scale developed by Mott (1972). | 300 employees in different service organizations Sex Female = 19% Male = 81% Average Age = 34 years Average Organizational Tenure = 5.35 years | The findings suggest that the safe and meaningful working environments (supportive management, role-clarity, self-expression, job challenge, recognition, and contribution) are positively related to work engagement. WE fully mediates the relationship between PsyClim. and organizational effectiveness. |
| 6. | (Volpone et al., 2012) | Managerial employees of a large | Cross-sectional design | Appraisal reactions: Five items were used to assess participants' reactions to | 5,357 out of 6,623 employees from diverse sample of retail employees More favourable appraisal reactions corresponded with |

retail organization over a 10-day period.

the company's performance-appraisal system.

Psychological diversity climate: A nine-item scale described by McKay et al. (2007) to assess participants' perceptions of the organization's diversity climate was used. These items assessed such issues as perceived level of the organization's commitment to diversity, fairness of organizational policies, and inclusiveness of the environment.

Employee engagement: Eight items by Saks, 2008 were used to assess engagement. These items relate to factors identified as the psychological conditions that facilitate employee engagement (e.g., meaningfulness, safety, availability; Kahn, 1990, 1992).

Race and Sex

White male = 2,129

White female = 2,253

Black = 286

Hispanic = 295

Mean organization tenure = 17.2

more favourable psychological diversity climate perceptions; thus, higher levels of engagement. This indirect relationship was significantly stronger for ethnic minority employees (Blacks and Hispanics) than for White employees. Nearly twice the mediation for Black employees was observed than for White male employees.

Psychological diversity climate perceptions partially mediated the positive relationship between appraisal reactions and employee engagement.

7. (Kuhnel et al., 2012) Germany. German companies in diverse industries.

Electronic questionnaires were administered three times a day over the course of one working week.

General and Day-specific work engagement was assessed with the 9-item version of the Utrecht Work Engagement Scale by Schaufeli, Bakker, & Salanova, 2006.

Day-specific state of being recovered in the morning was measured with the four-item scale by Sonnentag and Krueger (2006).

Day-specific job control was measured with four items of the ISTA (Instrument zur Stressbezogenen Tätigkeitsanalyse) developed by Semmer, Zapf, and Dunkel (1999).

114 out of 148 respondents.

Female = 62%

Male = 38%

Average Age = 32.9 years

Average professional experience in current organizations = 5.7 years

Departments

Human resources = 50.9%

Marketing = 14.9%

Consulting = 10.5%

Results indicated that day-specific resources (psychological climate, job control, and being recovered in the morning) promoted WE.

Day-specific WE was facilitated if there was a good climate (psychological climate) in the working team.

| | | | | | |
|-------------------------|---|--|--|---|--|
| 8. (Shuck et al., 2011) | A heterogeneous sampling of organizations from service, technology, healthcare, retail, banking, non-profit, and hospitality fields. The organizations were members of a commerce association | Correlational study. Internet-based survey | <p>Day-specific psychological climate was assessed at noon with the following 3 items. The first two items were developed by Demerouti <i>et al.</i> (2003). The third item was added to avoid potential problems with a two-item scale. Day-specific time pressure was measured with 3 items of the ISTA developed by Semmer <i>et al.</i> (1999).</p> <p>Employee engagement was measured by combining the meaningfulness, safety, and availability scales by May, Gilson, and Harter (2004) into a 15-item scale.</p> <p>Job fit was measured using the 5-item Person-Organization Fit Scale (POFS) by Resick, Baltes, and Shantz (2007).</p> <p>Affective commitment was measured using the 6-item Affective Commitment Scale (ACS) by Rhoades, Eisenberger, and Armeli (2001).</p> <p>Psychological climate was measured using the 14-item Psychological Climate Measure (PCM) by Brown and Leigh (1996). Only four of the six dimensions, supportive management, contribution, recognition, and challenge were measured.</p> <p>Discretionary effort was measured using the 7-item Discretionary Effort Scale (DES) by Lloyd (2008).</p> <p>Intention to turnover was measured using the 3-item Intention to Turnover Scale (ITS) by Colarelli (1984).</p> | <p>283 workers.</p> <p>Industries Service = 97 Manufacturing = 9 Professional = 106 Non-profit = 32 Un reported = 39</p> <p>Gender Female = 54% Male = 46%</p> <p>Race Caucasian = 134 Hispanic = 91</p> <p>Frontline team member = 39.2% (111) Management position = 32.1% (91) Executive positions = 21.7% (61)</p> <p>Age Group 30 – 39 years = 70 40 – 49 years = 66 50 – 59 years = 67</p> | Job fit, affective commitment and psychological climate were all significantly related to employee engagement. |
|-------------------------|---|--|--|---|--|

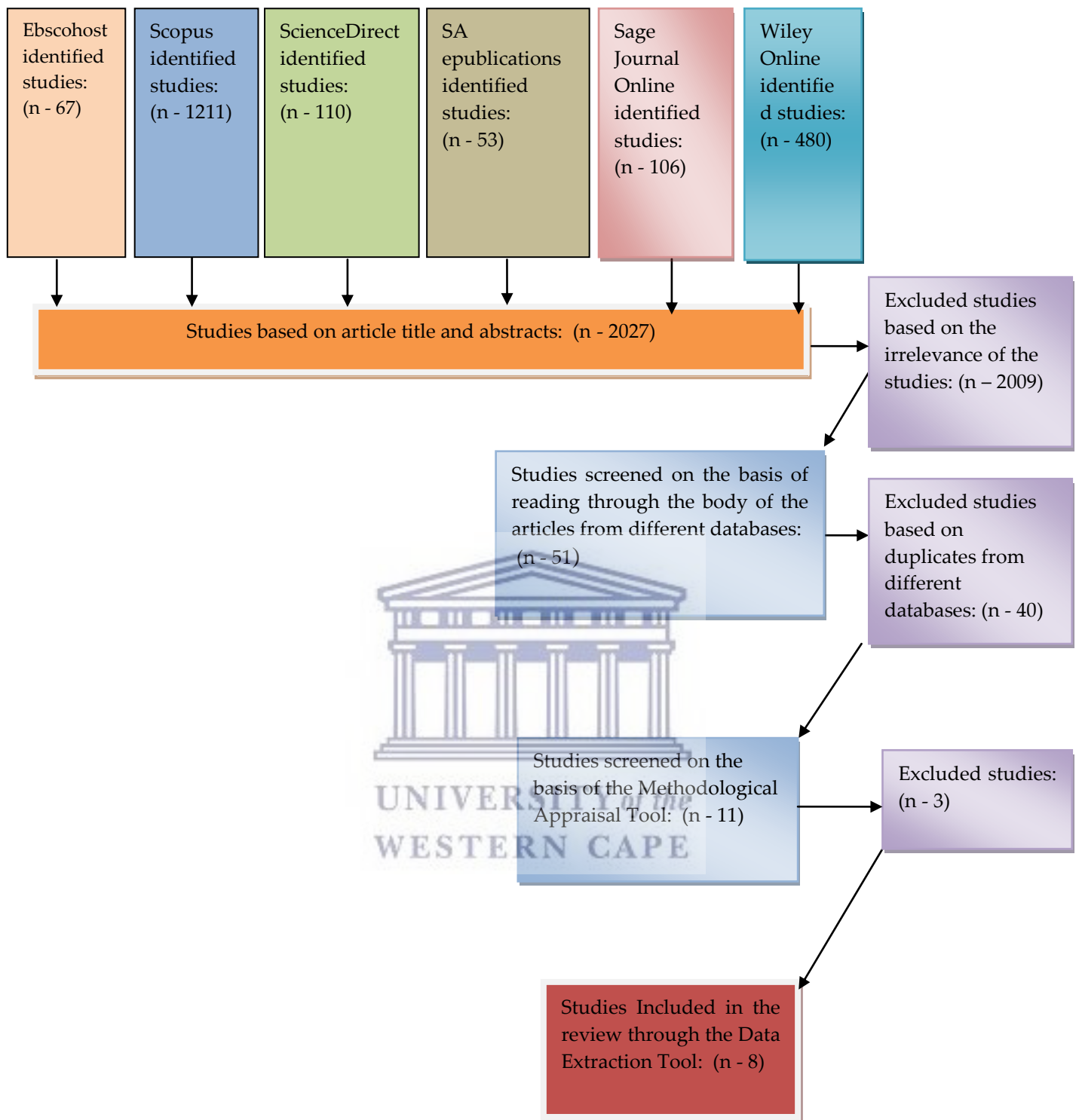


Figure 2.3: Flow chart for screening of studies: Psychological climate and Work engagement

2.5.12 Results

Figure 2.3 summarizes the results that were obtained for the different studies that were finally included in the review. The Methodological Appraisal Instrument was used to produce the final inclusion criteria and studies. Eight studies finally resulted from the use of the methodological appraisal section of the review. The criteria that were used in the methodological quality assessment instrument included sampling method used, response rate, measuring tools, sources of data used, whether psychological climate was looked at in the study and whether the relationship between psychological capital and work engagement was discussed. Of the 11 articles that formed part of the methodological appraisal, two reached the desired outcome in the 'good' category in the 67 – 100% range, whilst six reached the 'satisfactory' category in the 34 – 66% range. Three articles were excluded from the review because two fell into the 'bad' category whilst one study was review article. Therefore, only eight studies scaled through and were included in the final review. Therefore, of the 2 027 articles obtained from the search engines, only eight articles met with the reviewers' inclusion criteria. These eight studies were further and extensively reviewed in Table 2.8 - the Data Extraction Tool.

2.5.12.1 Overview of reviewed studies

Several designs were used for the eight studies that were reviewed. Many of the studies (Kataria et al., 2013b; Kuhnel et al., 2012; Mahon et al., 2014; Shuck & Jr, 2014) were not explicit in indicating the kind of design that was used. However, Kataria et al. (2013a) indicated that their study was survey-based, random selection, Lee and Ok (2015) utilized a convenience sampling technique, Shuck et al. (2011)'s study was correlational in nature whilst Volpone et al. (2012) utilized a cross-sectional design. Of the eight studies, two were conducted in the United States of America (Lee & Ok, 2015; Mahon et al., 2014), although one study (Shuck & Jr, 2014), indicated that the study was carried out in three different countries: (United states, Canada and Japan).

Two studies (Kataria et al., 2013a, 2013b) but the same authors were carried out in India, one in Germany (Kuhnel et al., 2012), whilst the remaining two just indicated that their studies involved diverse organizations. The participants used for the study ranged between IT companies to Health care organizations, Hotel line employees and diverse other profit/non-profit organizations.

2.5.12.2 Conceptualizations & Measures of Assessment

Psychological Climate

Mahon et al. (2014) conceptualized PsyClim based on the PEA “positive emotional attractor” dimensions of (Boyatzis, 2008). The authors proposed that PsyClim consists of two psychological factors: shared personal vision and shared positive mood. Shared positive mood indicates the emotional tie that employees have towards the organization their work in the organization whilst Shared personal vision are the positively exhibited emotions depicted by employees about the accomplishment of clearly specified organizational futuristic goals or vision (Mahon et al., 2014). The authors affirmed that when that these two psychological climate constructs enhance quality interrelationships in the workplace and consequently foster higher levels of engagement (Wijhe, Peeters, Schaufeli, & Hout, 2011). PsyClim was assessed with the PNEA Survey developed based on the work of (Boyatzis, 2008).

Kataria et al. (2013a, 2013b) conceptualized the PsyClim construct on the recommendations of Brown and Leigh (1996) who identified the PsyClim sub constructs as supportive management, role clarity, self-expression, recognition, contribution and job-challenge. These sub dimensions have been touted to have tremendous psychological employee implications because they depict employee perceptions regarding meaningfulness and safety at work and further generate a sense of responsibility, self-confidence and respect, and ultimately should lead to

organizational performance outcomes. (Kataria et al., 2013a, 2013b; Shuck et al., 2011; Shuck & Jr, 2014) assessed the PsyClim construct with the 21-item scale by Brown and Leigh (1996).

Lee and Ok (2015) conceptualized and measured the PsyClim construct with Amenumey and Lockwood's (2008) 13-item scale which consisted of four subscales which are customer orientation of the management, managerial support, internal service, and information/communication. The authors affirmed that these four sub dimensions of the PsyClim were positively associated with employee engagement and they strongly propose the PsyClim as a significant predictor of engagement.

Work Engagement

Most of the studies considered employee work engagement on the theoretical framework of (Kahn, 1990). A few others added the Conservation of Resources Theory (COR) theory and the Job Demands – Resources (JD-R) model dimension of WE.

Of the 8 articles, 4 articles (Kataria et al., 2013a, 2013b; Kuhnel et al., 2012; Lee & Ok, 2015) used the measuring dimensions (UWES-9) by (Schaufeli & Bakker, 2003; Schaufeli et al., 2006), 1 article (Mahon et al., 2014) used the 4-item scale by (Saks, 2006), another article (Volpone et al., 2012) used the 8-item scale by (Saks, 2008) whilst the last two articles (Shuck et al., 2011; Shuck & Jr, 2014) used the 18-item job engagement scale by (Rich et al., 2010) and the 15-item employee engagement scale by (May et al., 2004).

2.5.13 Discussion

This systematic review was undertaken to examine the relationships between psychological climate (PsyClim) and work engagement (WE). The review focused on

studies conducted on all available published studies between 1990 and 2016. Out of the 8 studies that met the inclusion criteria, none of the studies were conducted in Africa. Psychological Climate is an essential, integral part of today's workplace that must not be underestimated. Researchers in the African continent must make it a point of duty to embark on and publish studies on psychological climate and its relationship to organizational performance outcomes as the peculiarity of the African context may bring to limelight other issues that have not been previously indicated.

One of the psychological climate factors (i.e., shared positive mood) identified by (Mahon et al., 2014) was identified to have the strongest direct association to engagement. This point is valid because a person's emotions are contagious when exhibited. Therefore when employees' positive emotions "rub off on" other employees, even negatively inclined individuals in the workplace will more likely to develop the right climate qualities which will consequently lead to higher engagement levels. PsyClim with all its six dimensions was found as significantly contributing to work engagement with higher levels of engagement encouraging employees to behave in citizenship ways.

General and Day-specific WE was assessed by Kuhnel et al. (2012) who noted that day-specific PsyClim promoted WE and that day-specific WE was better facilitated if a good climate existed in the organization or team. Following the JD-R perspective, WE was treated as a temporary experience (Day-specific) that fluctuates within employees on a day-to-day basis. Deci and Ryan (1985) confirmed that because day-specific PsyClim satisfies the basic human wants and needs like the desire for relatedness, autonomy, and competence, it would most likely impact an intrinsic motivational role on WE.

Volpone et al. (2012) indicated in their study that favourable psychological climate perceptions produced higher levels of engagement. They however noted that this relationship was particularly significant for the Black and Hispanic population than for the White employees. The authors assumed that the effect of appraisal concerns were much more evident among those whose “social identity groups” have been denied equal employment opportunity.

2.5.14 Conclusion

Conclusively, findings in this review indicate that climate perceptions especially positively generated emotions and perceptions inform PsyClim which subsequently impacts on work engagement (Mahon et al., 2014; Wijhe et al., 2011). Employees are impacted based on how they perceive their environment and workplace atmosphere. The PsyClim construct indicates that employees act based on the personal psychological meaning they give to their environment. Although some of the included studies used different approaches, definitions and measuring instruments to assess the PsyClim construct, the findings invariably point to the benefits of employee perception of a safe and meaningful work environment (Kataria et al., 2013a).

2.6 TURNOVER INTENTION

2.6.1 Introduction

It has been observed in recent times, that most organizations now treat employees – human capital as their most important assets (Luthans et al., 2004). As such, great care must be taken to ensure that human capital which is significant for organization’s survival is sustained. Management strives to keep employees and discourage them from leaving especially employees that add great value to the organization. Talent retention is a crucial task for employers because no organization

wishes to lose its skilled or talented workers (Castro & Martins, 2010; Glen, 2006; Lumley, Coetzee, Tladinyane, & Ferreira, 2011; Roman, 2011). The loss of talented or skilled employees would give rise to the reduction of organizational performance, productivity and profitability. The loss of human capital brings about negative consequences and disruptive implications for any organization (Bothma & Roodt, 2012, 2013, Du Plooy & Roodt, 2010, 2013; Grissom, Nicholson-Crotty, & Keiser, 2012; Lambert, Cluse-Tolar, Pasupuleti, Prior, & Allen, 2012). Employers therefore need to put initiatives in place to retain its skilled employees and reduce the rate of employee turnover. If initiatives to curb absenteeism and employee turnover are not effectively put in place, the organization will not be able to sustain a competitive advantage over other associated organizations (Botha, Bussin, & De Swardt, 2011).

Turnover is a never-ending, organizational concern in this today's workplace which has been described as one of the most studied constructs in organizational literature. This is because of the high level of costs attached to the selection, recruitment, training and absorption of new employees (Darmon, 1990; Jones & Skarlicki, 2003; Mitra, Jenkins, Jr, & Gupta, 1992; Morrell, Loan-Clarke, & Wilkinson, 2004; Yin-Fah, Foon, Chee-Leong, & Osman, 2010). Intention to quit has been touted to generate both intangible (consequences of turnover on the morale of employees, organizational culture etc.) and tangible costs (recruitment, selection, training) for the workplace (Kotzé & Roodt, 2005; Morrell et al., 2004).

Employees quit their jobs when they feel unfairly treated by their organizations or employers (Jones & Skarlicki, 2003). Fairness could be seen with regards to organizational outcomes, processes and policies, interpersonal treatment by a supervisor or relationships with other fellow employees. Coetzee, Bergh and Schreuder (2010) also suggested that factors, such as talent and skill competition,

increased financial incentives and jobs with better working conditions could contribute to the challenge of turnover intentions and the actual turnover.

Turnover Intention rather than the actual turnover has been examined as a reliable predictor for actual organizational turnover. Furthermore, research has indicated that turnover intentions are the most significant, imminent antecedent to turnover (Bothma & Roodt, 2013; Cohen, Blake, & Goodman, 2016). However, some studies have presented contradictory results which give the opinion that turnover intentions is not a reliable predictor for actual turnover of employees (Cho & Lewis, 2012; Kirschenbaum & Weisberg, 1990).

2.6.2 Definition and Background of Turnover Intention (TI)

The TI research which was pioneered by March and Simon (1958) was geared towards employee perceived desire to quit at a workplace. Literature has interchangeably referred to TI with different other related words such as leaving or staying intentions, intention to quit, propensity to leave and intent to leave.

Sousa-Poza and Henneberger (2002, p. 1) defined Turnover intention as “the (subjective) probability that an individual will change his or her job within a certain time period”, whereas Tett and Meyer (1993, p. 262) defined Turnover intention as “the conscious and deliberate willfulness to leave the organization”. It is the desire or plan cultivated by an employee to exit an organization (Bothma & Roodt, 2013).

Vandenberg and Nelson (1999, p. 1315) described the intention to leave an organization as “an individual’s own estimated probability (subjective) that they are permanently leaving the organization at some point in the near future” whilst Mowday, Porter and Steers (1982) identifies it as the reduction in the level of an

employee's commitment towards work or organizational goals in which the desire to quit the organization is facilitated.

Although employees initially deal with job dissatisfaction and their grievances at the workplace through withdrawal behaviours (Lo & Aryee, 2003) such as disengagement and absenteeism, the intent to leave an organization then pops as a preceding phrase before the real quitting takes place. The intention to leave an organization is the immediate precursor or conclusive decision made by the individual before the actual turnover (Du Plooy & Roodt, 2010; Sousa-poza & Henneberger, 2004; Tett & Meyer, 1993).

The organization's resources are depleted significantly when costs that relate to absenteeism, recruitment, screening, hiring, orientation, training (Hancock, Allen, Bosco, McDaniel, & Pierce, 2013; Llorens & Stazyk, 2011; Von Hagel & Miller, 2011) are sustained. Additionally, Employees with turnover intentions are more likely to have misplaced priorities, thereby corroding organizational goals, performance and profitability (Karatepe & Ngeche, 2012). These kinds of employees will definitely not give their best for the cause of the organization. Furthermore, Chang and Lyons (2012; Heavey, Holwerda and Hausknecht (2013); Shuck, Reio Jr and Rocco (2011) has found associations between employee's demographics such as gender, age, education, length of tenure, income and their intent to leave the organization. Kochanski and Ledford (2001) suggests that there is always a likelihood of employee turnover after any significant reconstruction or modification in an organization.

2.6.3 Theoretical conceptualization of TI

The turnover intention literature has presented a comprehensive theoretical and conceptual explanation on why employees opt out of their organizations (Griffeth et al., 2000; Joseph, Ng, Koh, & Ang, 2007; Oosthuizen, Coetzee, & Munro, 2016).

Although some mild differences subsists among these models, the literature still touts the reasons behind turnover as dissatisfaction with the organization, the likelihood of upcoming alternatives, desire to search for those alternatives and the desire to opt out of the system.

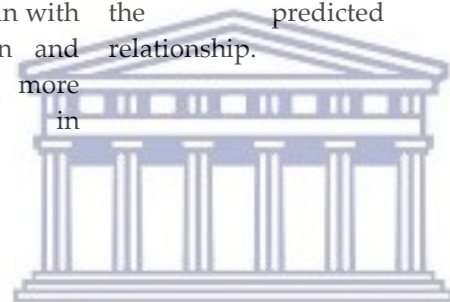
Table 2.9 presents several theoretical models that assist to give clarity to the TI literature.



TABLE 2.9: *Turnover Intention Theories and Models*

| Model | Organizational equilibrium theory (March & Simon, 1958) | Met expectations theory (Porter & Steers, 1973) | Linkage model (Mobley, 1977) | Steers and Mowday's model (Steers & Mowday, 1981) | The unfolding model of voluntary turnover (Lee & Mitchell, 1994) | Jacobs' turnover intention model (Jacobs 2005) |
|-----------------------|---|---|--|--|--|--|
| Description | Turnover occurs when an individual perceives that his or her contribution to the organization exceeds the rewards he or she is receiving. | "Met" expectations are influential determinants in turnover decisions. | A multi-stage model detailing the linkages between job satisfaction and turnover, detailing the withdrawal process and the sequence of steps that individuals undergo before leaving the organization. | A comprehensive 13-stage process model of voluntary employee turnover. Affective responses (including job satisfaction) influence the desire and intention to leave. | Turnover decisions are the result of expected or unexpected shocks to individuals' status quo, which leads them to assess their fit with their current job and to take various decision paths. | The turnover intention model proposes that positive or negative perceptions of organizational culture (predictors) are related to turnover intentions (criterion). |
| Characteristics | The inducement-contribution relationship is influenced by the "desirability of leaving one's job" and the "perceived ease of movement" that operate independently to influence an employee's motivation to leave an organization. | When an employee's prior expectations are met on the job, he or she is less likely to leave, whereas when an organization fails to meet the employee's expectations, dissatisfaction results and ultimately turnover. | One of the consequences of dissatisfaction is thoughts of leaving, leading to a series of withdrawal cognitions and job-search behaviours that link job dissatisfaction to actual turnover behaviour. | The interaction of turnover intention and alternate job opportunities, organizational characteristics and affective workplace experiences are the immediate precursors to an employee leaving an organization. | Turnover is a complex process of market-pull and psychological-push approaches affecting the decisions and behaviours of people who leave an organization voluntarily. | Determines which variables independently and/or interactively predict turnover intentions, by entering the independent variable, the proposed mediating variables, as well as various demographic variables into an equation |
| Influencers/Variables | The "desirability of leaving one's job" is generally determined by levels of job satisfaction. The "perceived ease of movement" is influenced by both | Factors that potentially relate to turnover intention, including organization-wide factors (e.g. pay and promotional policies, and organizational size), job content | Employee's values, job perceptions and labour market perceptions combine via the linkages to influence withdrawal intentions. | Job expectations and values, job performance, and organizational experiences are predictors of the individual's affective response to a job. A | Shocks, scripts, image violations, job satisfaction and job search are the major components of the unfolding model. Each decision path involves distinctive foci, | Organizational culture is the independent variable, while knowledge sharing, organizational commitment, organizational citizenship behaviour, |

| | | | | | |
|-------------------------------|--|--|--|--|--|
| macro and individual factors. | (e.g. job autonomy and responsibility, and role clarity) and personal factors (e.g. age, tenure and personality characteristics). | multitude of factors influence these relationships. | psychological processes and external events. | and job satisfaction are the mediating variables.(Jacobs & Roodt, 2008). | |
| Advantages and limitations | Received empirical support. Did not consider structural and economic factors in employees' decisions to leave or remain with the organization and was considered more psychological in nature. | Empirical studies of the model found that many of the "linkages" were not significant, had small effects or had signs that opposed the predicted relationship. | Empirical studies showed partial support for the model | Four distinctive psychological paths that individuals may follow prior to actual turnover. | Turnover intention scale was used in the development of the predictive model. Previous literature lacked formally validated instrument and most instruments in the literature only measured turnover intentions on a small number of items with most items being problematic (Jacobs, 2005). |



UNIVERSITY of the
WESTERN CAPE

Source:

Munro, Z. (2015). *Work-life balance, job satisfaction and turnover intention amongst information technology employees*. Unpublished master's dissertation, University of South Africa, Pretoria.

2.6.4 Antecedents of TI

2.6.4.1 Job Satisfaction

Job satisfaction has been touted as a significant role player in the turnover intents of employees. Relationships between career, job satisfaction and turnover intentions have been found (Ding & Lin, 2006). Similarly, Pienaar et al. (2007) observed that job dissatisfaction can be termed the most compelling antecedents of TI. The authors also noted that Job satisfaction negatively related to TI. Work alienation and burnout were significantly, positively related to TI whilst Organizational citizenship and work engagement were found to be significantly, negatively related to TI (Du Plooy & Roodt, 2010). Employee engagement typifies a positive work-related psychological state of mind in which the employee is vigourously absorbed and dedicated to his or her work roles (Schaufeli et al., 2002). When employees get dissatisfied with their job climate, job content or job context, there is an increased desire to explore other alternatives where their desires at work will be met. It is essential that employers and the organization initiate ways to keep employees satisfied at their workplace as this will increase the retention of workers. In contrast however, Wheeler, Gallagher, Brouer and Sablynski (2007) have posited that employee job dissatisfaction may lead to other outcomes aside TI.

2.6.4.2 Gender

Jawahar and Hemmasi (2006) have found that turnover intentions of women were influenced by the way they perceived support for women in the workplace although other studies disagreed and opined that there was an insignificant relationship between turnover intention and gender (Joseph et al., 2007; Martin & Roodt, 2008).

2.6.4.3 Race

Vallabh and Donald observed in their 2001 study that black supervisors were much more willing and contemplated opting out of their organizations than their white

colleagues. Contrarily, however, Martin and Roodt (2008) based on their own study opined that race was not a reliable criteria for predicting turnover intention of employees.

2.6.4.4 Age

Cogent relationships have been found between age and turnover intent. Research by Chawla and Sondhi (2011); Martin and Roodt (2008) observed an existing notable association between TI and the age of employees. This relationship portrayed that TI usually decreased with increase in age. It is envisaged that the older an employee gets, the more likelihood for such an employee to want to stay on and not leave the organization. This psychological state of mind could be as a result of the investments already acquired in the organization (Martin & Roodt, 2008). It could also be assumed that it may be because the desire for peer competition and the desire to increase one's skills has significantly reduced. Similarly, Ferres, Travaglione and Firms (2003) observed that TI has a higher tendency among younger employees than elderly ones.

2.6.4.5 Position/Length of Stay/ Work Experience/Tenure of Work

Although Cooper (2010); Quan and Cha (2010) did not observe any significant link between TI and the years of experience an employee has put into an organization, Ucho, Mkavga and Onyishi (2012) was of the opinion that a cogent link existed between TI and job tenure. Consequently, Tian-Foreman (2009) found that managerial employees exhibited a lower desire to leave an organization than non-managerial employees.

2.6.4.6 Education

Although Cooper's (2010) study did not support any relationship between education and TI, it could be assumed that when employees acquire more levels of education

and increase their skills, there is a likelihood for them to want to look for better job offers that will be willing to pay for their increased level of education and skill.

2.6.4.7 Leadership

Leaders have been seen to play a crucial role in shaping the perceptions of employees. Organizational commitment and engagement have been observed to increase when employees perceive that their effort is being appreciated and acknowledged by their supervisors (Campbell, Perry, Maertz, Allen, & Griffeth, 2013; Shuck et al., 2011). Employees' esteem, self-confidence and desire to stay at work will diminish when they feel used or perceive that their voice is silenced or not acknowledged (Chang & Lyons, 2012). Trust in a supervisor and perceived organizational support amongst other factors produced a negative link with TI (Canipe, 2006). Other studies have also emphasized the crucial impact the leader can make in decreasing the levels of TI in an organization (Newman, Thanacoody, & Hui, 2011; Tuzun & Kalemci, 2012).

2.6.5 Conclusion

Turnover is an incessant, persistent, recurrent concern for organizations and management. It is essential that one of the major antecedents to turnover that is Turnover Intention be studied and curbed if turnover is to be minimized in today's workplace. Extant literature on TI has been considered with particular emphasis placed on the antecedents, theories and models of TI. This background is crucial as it lays a good foundation for the conceptual model that was considered in this study.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The focus of this study was to develop and test a model explicating the influence of authentic leadership, psychological capital, psychological climate, turnover intention on employee engagement. In Chapter 2, the theoretical and conceptual definitions of the constructs under study were extensively and systematically considered. The literature study provided the insight and gave an explicit basis of what informed the research questions and hypotheses postulated in this study. To test the proposed model and provide empirical solutions to the research problem and questions, an appropriate research design is required. This chapter therefore examines and outlines the research design and methodological considerations employed in this study. Two phases were utilized to carry out this study and these are extensively discussed in this chapter. Phase 1 consists of three systematic literature reviews whilst Phase 2 is made up of a survey research method through a composite questionnaire. The step by step procedure used for the Phase 1 systematic reviews is discussed. The sampling techniques, methods of data analysis, the data collection instruments, and the statistical techniques employed for the survey method are also discussed. The scope and delineation of the study, the reliability, and validity of the data, the limitations encountered, and the demographic characteristics of the sample was considered. This chapter concludes with the discussions on the ethical considerations that were employed.

3.2 RESEARCH DESIGN AND PLAN

De Vos, Delpont, Fouché, and Strydom (2011) described a research design as a plan initiated to gather information on the desired area of focus. The researcher's intent in this current study is to explore the conceptual model that explicates the manner in

which authentic leadership, psychological capital, psychological climate, intention to quit relates with the engagement of employees in organizations. To proffer solutions to the named propositions, this study utilized a primary and secondary form of data collection. The secondary data were obtained through systematic literature reviews and the primary data collection was carried out via a quantitative approach through a survey research method with a composite questionnaire. Babbie (2010) amongst other authors suggests that a combination of methods may be an appropriate research design as the process would evaluate the research questions and propositions in the study. The characteristics of these two types of studies are discussed below.

3.3 PHASE ONE:

3.3.1 Research Methodology

3.3.1.1 *Systematic Reviews*

A Systematic Review “ is a literature review that is designed to locate, appraise and synthesize the best available evidence relating to a specific research question to provide informative and evidence-based answers” (Boland, Cherry, & Dickson, 2013, p.2). It is a method of comprehending a plethora of information, understanding and explaining what works and what does not. It is a “method of outlining areas of uncertainty and identifying where little or no relevant research has been done but where new studies are needed” (Petticrew & Roberts, 2008, p.2). As the name suggests, a systematic review follows a rigorous, systematic and transparent approach that is pre-planned and documented such that it affords users the opportunity to appraise the quality of the systematic review.

Furthermore, Petticrew and Roberts (2008) emphasizes that a systematic review pinpoints areas where previous studies suggest that researchers know so much about a topic, whereas in actual terms, there is little credible evidence to support

what is believed. A systematic review is of utmost importance because most of the time, the results of single studies or of the traditional literature review are often biased and carry greater credibility than they deserve and is sometimes difficult to know which of the studies to believe. Peticrew and Roberts (2008, p.5) also added that literature reviews, “even those written by experts, frequently summarize highly unrepresentative samples of studies in an unsystematic and uncritical fashion” however, systematic reviews aims to identify as many studies on the subject of interest as is “reasonably possible” through a comprehensive search strategy which is developed and documented before the commencement of the review.

Systematic reviews has been considered the most appropriate way of synthesizing findings from a number of studies as long as these studies investigate the same questions. These studies may be from health, education or other disciplines as long as they follow well-defined and transparent steps. These steps include; defining the problem or question or, identifying and critically assessing all available evidence, synthesizing findings and presenting relevant conclusions (Boland et al., 2017). However, this is yet to be utilized and maximized among Industrial Psychology researchers. Rojon, McDowall, and Saunders (2011) emphasize that Industrial, Work and Organizational (IWO) psychologists are yet to adopt and fully support the systematic review methodology. A search made by the authors of 13 relevant journals like Journal of Occupational and Organizational Psychology did not produce any published systematic review. Management and Organization Sciences (MOS) researchers have recently argued that the use of systematic reviews in IWO Psychology are valuable and should be an essential methodology for “locating, appraising, synthesizing, and reporting” previous studies (Rojon et al., 2011, p.3). Unlike the narrative literature review, the researcher is not permitted to include just any study he or she deems fit because all the studies must be subjected to specific, well defined steps as these steps would indicate whether the studies would be

eligible for inclusion or not. Moreover, systematic reviews are publishable studies unlike the narrative literature review.

3.3.2 Data Collection Procedure

Three systematic reviews were conducted. These reviews laid emphasis on the relationships between authentic leadership, psychological capital, psychological climate and work engagement. These three systematic reviews indicated whether the relationships that existed in existing literature supports or contradicts the proposed model of relationships in the second phase of the study. The three reviews that were studied are the relationship between (i) authentic leadership and work engagement, (ii) psychological capital and work engagement, and (iii) psychological climate and work engagement. These relationships were ascertained by the use of electronic databases and journals such as Ebscohost, SAE Publications, SAGE Online, Science Direct, Scopus, Academic Search Complete, PsychARTICLES, Wiley Online and verified by the Google Scholar search machine.

3.3.2.1 Inclusion criteria:

Literature that was eligible for inclusion into the systematic review included: (i) studies published in or translated into the English language; (ii) studies published between 1990 and 2016; (iii) studies that included employers, leaders, managers, employees or followers in an organization or institution; (iv) studies that would examine the relationships between authentic leadership, psychological capital, psychological climate, and employee engagement and (v) Studies that utilized quantitative methods of research.

3.3.2.2 Exclusion criteria:

Literature that was excluded from the systematic review included: (i) unpublished studies, (ii) studies published before 1990 and after 2016 and (iii) studies that

included other factors predicting employee engagement aside the constructs under study.

3.3.2.3 Keywords:

Authentic leadership, authentic leader, psychological capital, psychological climate, work employment, engagement, job engagement, intention to quit, turnover intention and employee engagement.

3.3.2.4 Methodological quality appraisal:

The methodological quality of the searches were assessed with the use of the methodological quality appraisal tool adapted from (Roman & Frantz, 2013). As a reponse to a broad based review of current quality assessment tools used for systematic reviews, this methodological quality appraisal tool was developed (Wong, Cheung, & Hart, 2008). It is a concise quality appraisal checklist developed to assist in making standardized conclusions regarding the quality of studies used. The reliability and the validity of this tool had been previously confirmed (Louw, Morris, & Grimmer-Somers, 2007; Roman & Frantz, 2013; Wong, Cheung, & Hart, 2008).

The methodological quality appraisal tool was used to evaluate the sampling methods, response rate, validity and reliability of the measuring tool and also the data source. A possible inclusion into the review was considered when the methodological quality appraisal score obtained was considered satisfactory or good.

3.3.2.5 Data extraction:

An adapted version of the data extraction tool by Roman and Frantz, (2013) was utilized by the researcher. The reliability and the validity of this tool had been

previously confirmed (Louw, Morris, & Grimmer-Somers, 2007; Roman & Frantz, 2013; Wong, Cheung, & Hart, 2008). This tool is used to extract the needed information from the methodological appraised included studies. The data gathered from the extraction tool included: Author(s) name(s), country/geographical location, study design, participant demographic details, measures used, the association between the constructs and the main findings of the study.

3.4 PHASE TWO:

3.4.1 Quantitative Design – Survey Studies

The second part of this study utilized a survey research method in gathering data as it would assist in establishing the relationships that exist between the above mentioned constructs. Standardized measuring instruments were used to gather data. Kerlinger and Lee (2000) refer to survey research as a research approach in which questionnaires are administered to a sample of respondents that form part of a larger population. This, the authors believe form the basis of “exploring the incidence, distribution and interrelations of sociological and psychological variables.” Additionally, survey research falls under the “non-experimental scientific inquiries” which is designed to uncover the relationships and associations among psychological, sociological, and educational variables in actual social structures (Kerlinger & Lee, 2000). This second phase employed an *ex post facto*, quantitative design.

3.4.2 Evaluation of the Design - Ex Post Facto

Ex post facto design applies to an event that has already occurred. In an *ex-post facto* research study, the researcher explores the justification for a cause that has already occurred. No direct control was put on the independent variables and thus cannot be manipulated. Inferences were therefore made on the relationships that existed among the variables. A scientific method was thus initiated to examine the

relationships between the independent and the dependent variables. Independent constructs are investigated in retrospect to determine the most likely consequence that a change in independent variable could have on a dependent variables (Simon & Goes, 2013).

Whilst making comparisons between an experimental design and an ex post facto design, Kerlinger and Lee (2000) cautioned against making erroneous assumptions or inferences which could occur when interpreting the data.



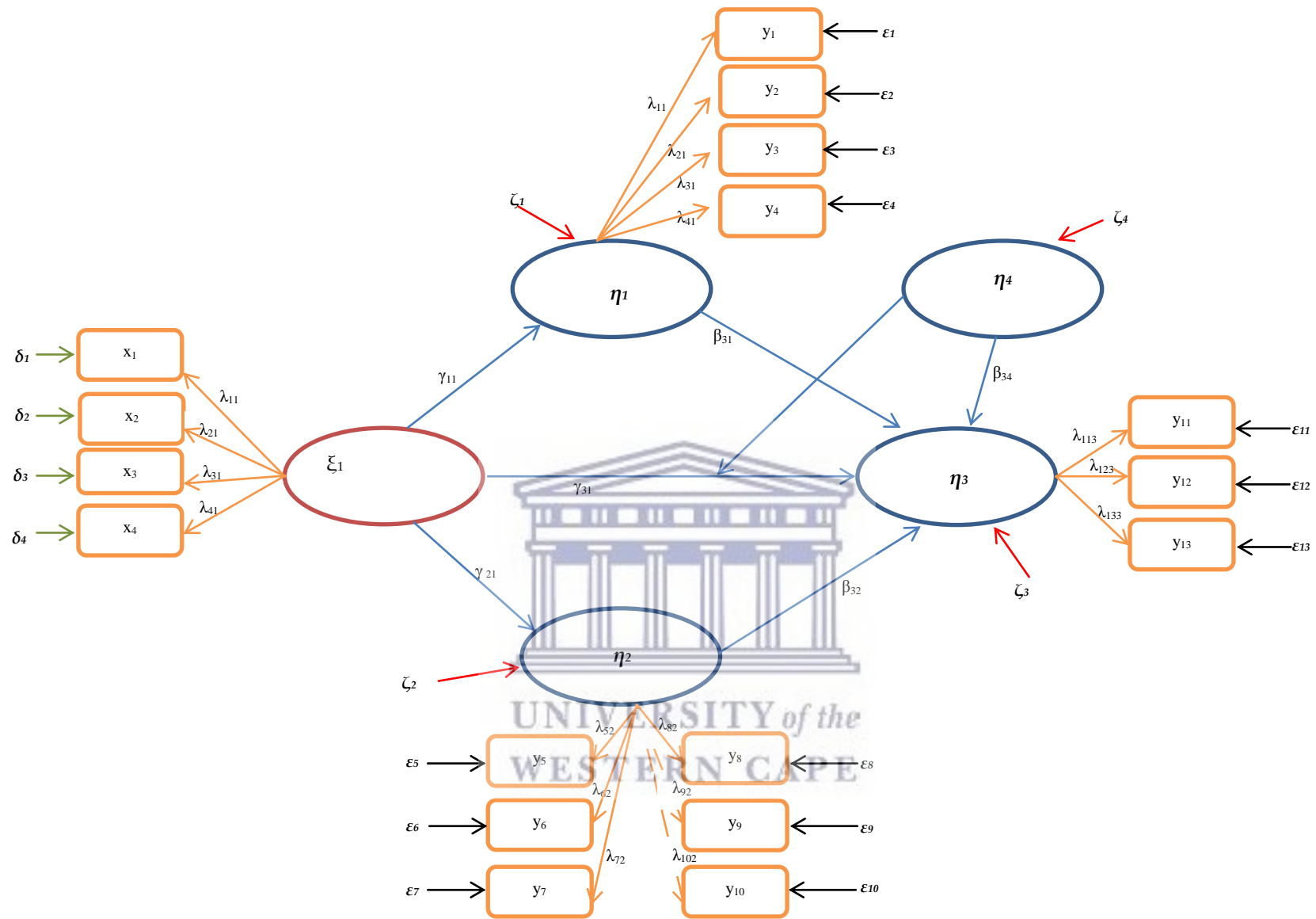


Figure 3.1: The proposed structural model depicting the relationships between authentic leadership, psychological capital, psychological climate, turnover intention and employee engagement

3.4.3 Substantive research hypotheses

One of the dual objectives of this study is to undertake an empirical investigation that tests the proposed theoretical model of the relationships among the variables under investigation.

The predominant substantive objectives were examined and subsequently broken down into the following detailed, path-specific hypotheses:

Hypothesis 1: Authentic leadership behaviours positively affects work engagement.

Hypothesis 2: Psychological capital positively affects work engagement.

Hypothesis 3: Psychological climate positively affects work engagement.

Hypothesis 4: Psychological capital mediates the relationship between authentic leadership and work engagement.

Hypothesis 5: Psychological climate mediates the relationship between authentic leadership and work engagement.

Hypothesis 6: Turnover intention negatively relates to work engagement.

Hypothesis 7: Turnover intention negatively moderates the relationship between authentic leadership and work engagement.

Measurement equations for the structural variables

$$\eta_1 = \gamma_{11}\xi_1 + \zeta_1 \text{-----[3.1]}$$

$$\eta_2 = \gamma_{21}\xi_1 + \zeta_2 \text{-----[3.2]}$$

$$\eta_3 = \beta_{32}\eta_2 + \gamma_{31}\xi_1 + \beta_{31}\eta_1 + \beta_{34}\eta_1 + \zeta_3 \text{-----[3.3]}$$

$$\eta_4 = \gamma_{31}\xi_1 + \beta_{34}\eta_3 + \zeta_4 \text{-----[3.4]}$$

Measurement equations for the structural variables in matrix form

$$\begin{pmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \\ \eta_4 \end{pmatrix} = \begin{pmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ B_{31} & B_{32} & 0 \\ 0 & 0 & 0 \end{pmatrix} \begin{pmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \\ \eta_4 \end{pmatrix} + \begin{pmatrix} \gamma_{11} \\ \gamma_{12} \\ \gamma_{13} \\ \gamma_{14} \end{pmatrix} \begin{pmatrix} \xi_1 \end{pmatrix} + \begin{pmatrix} \zeta_1 \\ \zeta_2 \\ \zeta_3 \\ \zeta_4 \end{pmatrix}$$

Measurement equations for the endogenous variables

$$Y_1 = \lambda_{11} \eta_1 + \varepsilon_1$$

$$Y_8 = \lambda_{82} \eta_1 + \varepsilon_8$$

$$Y_2 = \lambda_{21} \eta_1 + \varepsilon_2$$

$$Y_9 = \lambda_{92} \eta_1 + \varepsilon_9$$

$$Y_3 = \lambda_{31} \eta_1 + \varepsilon_3$$

$$Y_{10} = \lambda_{102} \eta_1 + \varepsilon_{10}$$

$$Y_4 = \lambda_{41} \eta_1 + \varepsilon_4$$

$$Y_{11} = \lambda_{113} \eta_1 + \varepsilon_{11}$$

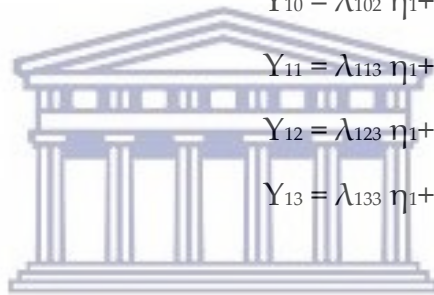
$$Y_5 = \lambda_{52} \eta_1 + \varepsilon_5$$

$$Y_{12} = \lambda_{123} \eta_1 + \varepsilon_{12}$$

$$Y_6 = \lambda_{62} \eta_1 + \varepsilon_6$$

$$Y_{13} = \lambda_{133} \eta_1 + \varepsilon_{13}$$

$$Y_7 = \lambda_{72} \eta_1 + \varepsilon_7$$



UNIVERSITY of the
WESTERN CAPE

Measurement equations for the endogenous variables in matrix form

$$\begin{pmatrix} Y_1 \\ Y_2 \\ Y_3 \\ Y_4 \\ Y_5 \\ Y_6 \\ Y_7 \\ Y_8 \\ Y_9 \\ Y_{10} \\ Y_{11} \end{pmatrix} = \begin{pmatrix} \gamma_{11} & 0 & 0 \\ \gamma_{12} & 0 & 0 \\ \gamma_{13} & 0 & 0 \\ \gamma_{14} & 0 & 0 \\ 0 & \gamma_{52} & 0 \\ 0 & \gamma_{62} & 0 \\ 0 & \gamma_{72} & 0 \\ 0 & \gamma_{82} & 0 \\ 0 & \gamma_{92} & 0 \\ 0 & \gamma_{102} & 0 \\ 0 & 0 & 0 \end{pmatrix} \begin{pmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \end{pmatrix} + \begin{pmatrix} \zeta_1 \\ \zeta_2 \\ \zeta_3 \\ \zeta_4 \\ \zeta_5 \\ \zeta_6 \\ \zeta_7 \\ \zeta_8 \\ \zeta_9 \\ \zeta_{10} \\ \zeta_{11} \end{pmatrix}$$

Measurement equations for the exogenous variables

$$X_1 = \lambda_{11}\xi_1 + \delta_1$$

$$X_3 = \lambda_{31}\xi_1 + \delta_3$$

$$X_2 = \lambda_{21}\xi_1 + \delta_2$$

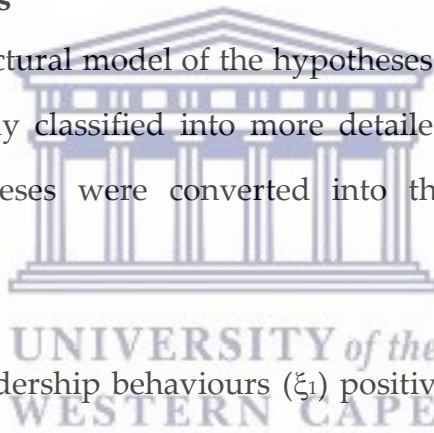
$$X_4 = \lambda_{41}\xi_1 + \delta_4$$

Measurement equations for the exogenous variables in matrix form

$$\begin{pmatrix} X_1 \\ X_2 \\ X_3 \\ X_4 \end{pmatrix} = \begin{pmatrix} \lambda_{11} \\ \lambda_{12} \\ \lambda_{13} \\ \lambda_{14} \end{pmatrix} \begin{pmatrix} \xi_1 \end{pmatrix} + \begin{pmatrix} \delta_1 \\ \delta_2 \\ \delta_3 \\ \delta_4 \end{pmatrix}$$

3.4.4 Statistical Hypotheses

The pivotal substantive structural model of the hypotheses for the study were critically scrutinized and subsequently classified into more detailed, path-specific hypotheses. These path-specific hypotheses were converted into the ensuing path coefficient statistical hypotheses.



Hypothesis 1: Authentic leadership behaviours (ξ_1) positively affect work engagement (η_3).

$$H_{01}: \gamma_{31} = 0$$

$$H_{a1}: \gamma_{31} > 0$$

Hypothesis 2: Psychological capital (η_1) positively affects work engagement (η_3).

$$H_{02}: \beta_{31} = 0$$

$$H_{a2}: \beta_{31} > 0$$

Hypothesis 3: Psychological climate (η_2) positively affects work engagement (η_3).

$$H_{03}: \beta_{32} = 0$$

$$H_{a3}: \beta_{32} > 0$$

Hypothesis 4: Psychological Capital (η_1) mediates the relationship between authentic leadership (ξ_1) and work engagement (η_3).

$$H_{04}: \gamma_{11}\beta_{31} = 0$$

$$H_{a4}: \gamma_{11}\beta_{31} > 0$$

Hypothesis 5: Psychological climate (η_2) mediates the relationship between authentic leadership (ξ_1) and work engagement (η_3).

$$H_{05}: \gamma_{21}\beta_{32} = 0$$

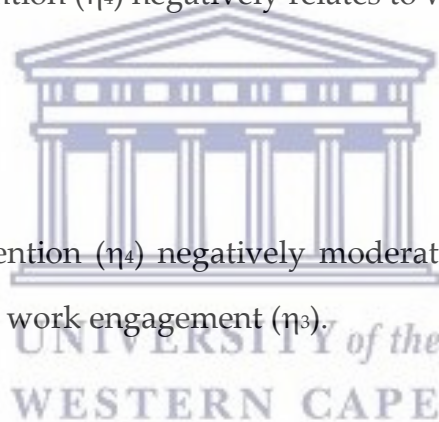
$$H_{a5}: \gamma_{21}\beta_{32} > 0$$

Hypothesis 6: Turnover Intention (η_4) negatively relates to work engagement (η_3).

$$H_{06}: \beta_{34} = 0$$

$$H_{a6}: \beta_{34} > 0$$

Hypothesis 7: Turnover Intention (η_4) negatively moderates the relationship between authentic leadership (ξ_1) and work engagement (η_3).



3.4.5 Population and Sample

The second phase of this study employed a convenience non-probability sampling method. Therefore, every available bank worker in Nigeria who was interested in the study was invited to participate. However, great importance was placed on the heterogeneity of the sample such that an even representative sample of all the demographic constructs such as gender, department in the organization, ethnic differences and age were achieved.

3.4.6 Sample Methods and Selection Techniques

De Vos, Strydom, Fouche, and Delport (2005) identified a study sample or population as the total number of people, actions, organizational units, case records or any other sampling item that the research problem is focused on.

The first phase of this study utilized search engines, databases and several journals as the study population whilst the sample for the second phase consisted of individuals employed in the banking sector in Nigeria. In order to participate in the second phase of this study and to ensure the integrity of respondents' feedback, respondents were required to have had at least 12 years of schooling and proficiency in English. Furthermore, the respondents must be employed in a bank and must have a direct supervisor or manager he or she reports to as the survey required respondents to evaluate their leader's authenticity.

The Convenience sampling technique was used to identify respondents which according to Kerlinger and Lee (2000), is a method that to obtain presumably typical groups in a sample.

3.4.7 Adequacy of the sample size

Saunders, Lewis, and Thornhill (2009) proposed that the larger the size of a sample, the more closely its distribution would be to the normal distribution and thus the more robust the data obtained would be. Large samples increase the statistical power. In other words, valid inferences are made about the population from the research findings (Blanche & Durrheim, 1999). However, it has been argued by Bryman and Bell (2003; 2015), that the total size and not the relative size of a sample is what increases validation especially for a study utilizing a non-probability sampling method, the rational association between the aim of the research and the sample selection technique is most

crucial (Saunders et al., 2015). Patton (2002) also noted that the sample size depends on the research questions, research problem, objectives of the study and the resources available for the study. It is, however, of great importance that sufficient interviews or questionnaires be administered to ensure the generalizability of the results from the study.

The initial target population for the research study were bank employees in Nigeria and South Africa. The size of bank employees in each population especially in the “clustered samples” that is the target cities was projected to be more than 400 individuals and 25% of this population was deemed appropriate as a sample size. According to Bagozzi and Yi (2012), this size is regarded as an acceptable sample size for purposes of conducting Structural Equations Modelling (SEM) and Confirmatory Factor Analysis (CFA). In essence, this study aimed for a sample size of 300 bank employees for each sample, however, the researcher could not achieve this target despite all measures initiated to achieve the intended target. The final sample for the Nigerian sample comprised of 213 bank employees whilst the South African sample was 40 in number. These employees were from different divisions/departments in the participating banks. Due to data collection challenges, the South African sample was excluded from the study because the sample sizes from the two countries were not comparative enough for analysis.

3.4.8 Research Participants and Sampling

Since the sampling process endeavours to make use of a portion of the target population and generalize it as being representative of that population Bryman and Bell (2003), a sampled population was sought for the target population. This study utilized a Convenience non-probability sampling technique in which the researcher endeavoured to make the sample as representative as possible of the population under study. This is

a non-probability sampling method that allows the researcher to deliberately administer the questionnaires only to the target population - which are bank employees with the above stated criteria (Neuman, 2014; Saunders et al., 2015). However, as it is typical of non-probability sampling methods, it may not be representative of the target population because it could be susceptible to other external influences (Saunders et al., 2015). It is therefore imperative that caution be employed while generalizing the results obtained from non-probability sampling studies.

The sample from the Nigerian population consisted of 213 bank employees. This sample consisted of 88 female (41.3%) and 100 male (47%) with 25 (11.7%) as missing data. The majority (47.4%) fell in the 31 – 40 age category. The ethnic distribution in the sample was highly skewed with Blacks reporting (96.7%), Coloureds (0.55%), Whites (2.2%) and Asians (0.55%). Regarding highest level of qualification, the majority of respondents had a particular degree (56.9%). The demographic sample profile of the participants is shown in Table 3.1.

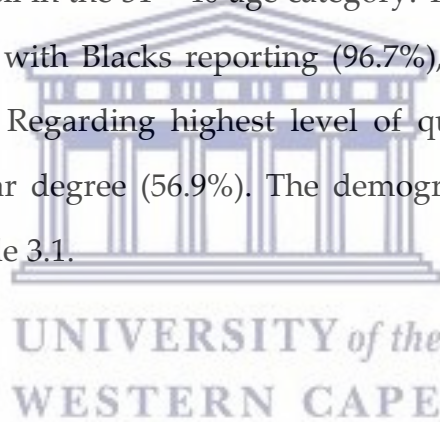


TABLE 3.1

Sample Summary

| Variables | Frequencies | Valid Percentages (%) |
|----------------------------|--------------------|------------------------------|
| Gender | | |
| Female | 88 | 41.3 |
| Male | 100 | 47 |
| Missing | 25 | 11.7 |
| Age of participants | | |
| Below 20 | 1 | 0.5 |
| 21 – 30 | 75 | 39.5 |
| 31 – 40 | 90 | 47.4 |
| 41 – 50 | 16 | 8.4 |
| 51 – 60 | 4 | 2.1 |
| Above 61 | 4 | 2.1 |

Missing 23

Ethnic groups

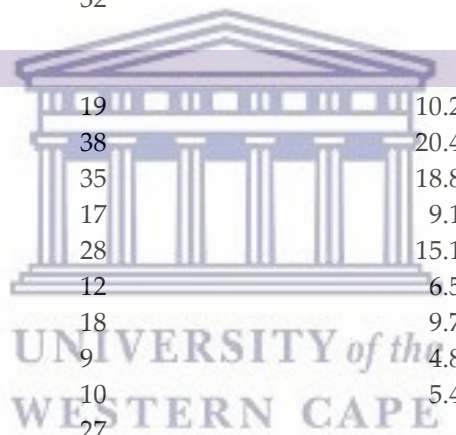
| | | |
|----------|-----|------|
| Black | 176 | 96.7 |
| White | 4 | 2.2 |
| Coloured | 1 | 0.55 |
| Asian | 1 | 0.55 |
| Missing | 31 | |

Education

| | | |
|-----------------|-----|------|
| Primary | 0 | 0 |
| Secondary | 3 | 1.7 |
| Matric | 4 | 2.2 |
| Degree | 103 | 56.9 |
| Honours | 7 | 3.8 |
| Masters' Degree | 55 | 30.4 |
| PhD | 0 | 0 |
| Others | 9 | 5 |
| Missing | 32 | |

Length of employment

| | | |
|--------------------|----|------|
| Below 1 year | 19 | 10.2 |
| 1 – 2 years | 38 | 20.4 |
| 2 – 3 years | 35 | 18.8 |
| 3 – 4 years | 17 | 9.1 |
| 4 – 6 years | 28 | 15.1 |
| 6 – 8 years | 12 | 6.5 |
| 8 – 10 years | 18 | 9.7 |
| 11 – 15 years | 9 | 4.8 |
| 15 years and above | 10 | 5.4 |
| Missing | 27 | |



Department

| | | |
|------------------------|----|------|
| Finance/Accounting | 62 | 33.6 |
| Human Resources | 7 | 3.8 |
| Information Technology | 11 | 6.0 |
| Administration | 20 | 10.9 |
| Sales/Marketing | 46 | 25 |
| Research & Development | 2 | 1.1 |
| Manufacturing | 4 | 2.2 |
| Engineering | 2 | 1.1 |
| Others | 30 | 16.3 |
| Missing | 29 | |

Position

| | | |
|-----------------------------------|-----|------|
| Independent/Contract | 12 | 6.6 |
| Employee – No Management Position | 113 | 62.4 |
| Operational Manager | 41 | 22.7 |

| | | |
|---------------------|----|-----|
| Middle-line Manager | 11 | 6.1 |
| Top Manager | 4 | 2.2 |
| Missing | 32 | |

3.4.9 Data Collection Procedure

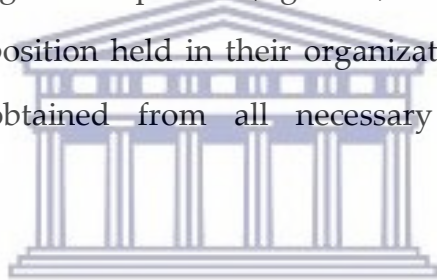
Respondents were required to complete a composite self-administered questionnaire – comprising of several measures. According to Babbie and Mouton (2001), self-administered questionnaires require a sufficient level of literacy from the respondents and also require identifiable addresses in case of mailing purposes. Self-administered questionnaires are generally more cost efficient, quicker, allows for the attainability of large samples, lacks interview prejudice and promotes the likelihood that sincere responses would be received on sensitive issues as a result of confidentiality (Babbie & Mouton, 2001).

Initially, the researcher developed a Google Form where all the measures being administered were included. This form was then forwarded to recipients through a Snowballing Sampling Method. This course of action was taken so as to have access to more respondents and to allow the respondents easy accessibility to the questionnaires since many of the bank employees have internet access. However, this route was discarded because of the very low feedback and turnaround rate – about 10 questionnaires were completed in a space of about 6 weeks. The second alternative was then implemented which was distributing the printed copies of the questionnaires to participants.

The composite questionnaire comprised of a biographical questionnaire, as well as 5 additional questionnaires which was designed to measure: authentic leadership (Neider & Schriesheim, 2011), psychological Capital (Luthans et al., 2010, 2007), psychological climate (Brown & Leigh, 1996), turnover intention (Samuel, 2017), and work

engagement (Schaufeli & Bakker, 2003). These measures were used to gather information from several banks in Nigeria. The questionnaire contained a covering letter to each respondent, informing them of the research focus and process. This letter outlined the purpose of the research and requested for assistance and cooperation from all targeted employees in completing the questionnaires.

The respondents were asked to rate their leader's authenticity, rate their own PsyCap, psychological climate, turnover intention and their own perceived engagement at their work places. The first part of the questionnaire comprised of a biographical section where the respondents had to indicate demographic variables such as their reporting unit, tenure in the bank, age of respondent, gender, ethnicity, highest educational qualification obtained and position held in their organization. Permission to conduct the present study was obtained from all necessary authorities prior to the commencement of the study.



3.5 ETHICAL COMPLIANCE

This study complied with the standard ethical considerations as specified by the UWC Research Ethics Policy and the Supervision Guide of the University of the Western Cape.

Ethics are synonymous with moral principles and integrity. Research ethics are aimed at ensuring that no damage is done to any of the parties involved in the research process, therefore careful measures were put in place to ensure that all relevant guidelines were adhered to. Additionally, the HPCSA is explicit about the need to preserve the well-being, dignity, safety and rights of participants when conducting research.

Consistent with these guidelines, the researcher was committed to the following ethical considerations.

3.5.1 Beneficence and Non-Maleficence

- The purpose of the study which is to contribute to knowledge was explicitly communicated to the respondents.
- The questionnaires used for the purpose of the study were standardized measures that have been validated and used in many countries.
- Concern for the interests of the participants was treated as paramount.
- The researcher strove for an unbiased and objective data gathering procedure and reporting of the study findings.
- Thoroughness and accurate measures were ascertained by the researcher to satisfy and ensure exceptional academic and institutional standards and requirements.
- If requested for, the researcher will present the findings and recommendations of the study to the interested relevant stakeholders.

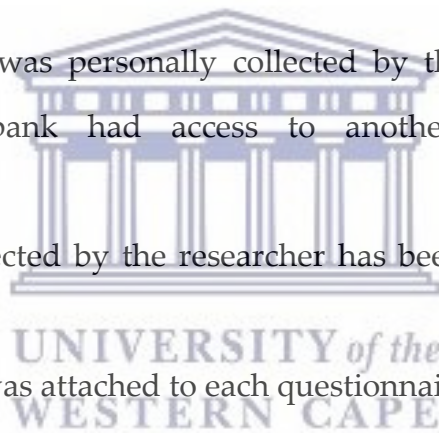
3.5.2 Informed Consent

- The rights, welfare, identities and interests of the participants involved were protected. No damage was done to the physical, physiological, financial and social standing of any of the respondent.
- Consent letters were given to the participants to read through and opportunity was given to them to raise any issues of concern as they deem fit.
- Participants were informed of their rights to withdraw from completing the questionnaire at any time, without any explanations or prejudices.

- Considerable care was taken to communicate explicitly with the participants that their refusal to participate in the study would not impact their positions or relationships at work negatively.
- No incentive was given to any of the participants to facilitate their involvement in the study.

3.5.3 Confidentiality

- Procedures for protecting the confidentiality of participants were strictly followed.
- All questionnaires were coded with numbers to ensure anonymity of the participants.
- Every questionnaire was personally collected by the researcher and no other employee of the bank had access to another participant's completed questionnaires.
- The information collected by the researcher has been carefully stored in a safe place.
- An ethics statement was attached to each questionnaire.



3.6 MEASURING INSTRUMENTS

A composite questionnaire comprising of five different standardized measuring instruments were employed to measure the constructs under study. Additionally, these five instruments were complemented with a demographic questionnaire which was included to provide an understanding of the participant completing the questionnaire. The sections below attempt to provide an explanation of each instrument's psychometric properties as established in literature.

3.6.1 Demographic Information

The researcher developed the demographic questionnaire which indicated items that described the distinguishing features or categories of each individual participant in the sample. Questions that aimed to extract information from the respondents with regards to age group, gender, educational level, department in organization, occupational level, length of employment in present job and position occupied in current organization were contained within this section.

3.6.2 Authentic Leadership Inventory

3.6.2.1 *Nature and Composition of the ALI*

Authentic Leadership was assessed with the multidimensional 16-item Authentic Leadership Instrument (ALI) by (Neider & Schriesheim, 2011). The ALI assesses the same components and dimensions like the Authentic Leadership Questionnaire (ALQ) developed by (Walumbwa et al., 2008). The authors developed the ALI on the basis of the four dimensional instrument which was operationalized and conceptualized by (Walumbwa et al., 2008). The authors developed the ALI because of some of their misgivings towards the ALQ (Walumbwa et al., 2008). They asserted that “the instrument was not available for commercial use - future use for research purposes was going to become challenging”, the “content analysis was very subjective” and that Walumbwa et al. (2008) found that a “second-order factor model fitted the data significantly better than a first-order factor model” (Van Der Vaart, Stander, & Rothmann, 2016).

The original ALI measured four theoretically related components which were: **self-awareness** (4 items), an example of which is - “My leader is clearly aware of the impact he or she has on others”, **relational transparency** (4 items), a sample of which is - “My leader admits mistakes when they occur”, **internalized moral perspective** (4 items), an

item out of which is - “My leader uses his or her core beliefs to makes decisions”, and, **balanced processing** (4 items), an example of which is - “My leader carefully listens to alternative perspectives before reaching a conclusion”. Respondents were asked to rate their current supervisor/manager on a 5-point Likert scale ranging from 1= Disagree Strongly to 5 = Agree Strongly.

Three different samples were used to test the validity and reliability of the ALI. Two problematic items (1 and 6) were deleted from the original scale. Therefore the resulting 14 items were: Relational transparency - 3 items, Self-awareness - 3 items, Internalized moral perspective – 4 items and Balanced processing – 4 items. Results of analyses from their second study proved that construct, content and discriminant validity as well as internal consistency were supported (Neider & Schriesheim, 2011).

3.6.2.2 Reliability and Validity of the ALI

The instrument gave indications of its reliability with the Cronbach’s alpha coefficients ($\alpha = .74$ to $.85$). Item 9 gave an average reliability estimate of $.46$ with a high level measurement error of $.79$ (Neider & Schriesheim, 2011).

In a quantitative cross-sectional South African study comprising of 244 employees in a Mining company, Van Der Vaart, Stander, and Rothmann (2016), indicated that the Authentic Leadership Inventory showed an acceptable fit with majority of the variables exhibiting satisfactory reliability estimates between $.60$ and $.93$. The authors, however, noted that the Balanced Processing component of the ALI was below acceptable reliability estimates ($.43$) - (“My leader uses his/her core beliefs to make decisions”) having the lowest loading on authentic leadership ($\beta = .48, p < .001$). In essence, this component needs additional work and improvement. Similarly to the findings of Neider and Schriesheim (2011), items 1 and 6 were removed from the analyses. In

another South African study, Stander et al., 2015 indicated a reliability ($\alpha = .93$) of the ALI. Studies have found acceptable reliabilities with Cronbach's alpha coefficients ranging between .74 and .90 (Men & Stacks, 2014; Neider & Schriesheim, 2011; Stander et al., 2015).

3.6.3 Psychological Capital Questionnaire (PCQ)

3.6.3.1 *Nature and Composition of the PsyCap Questionnaire*

The 24-item PCQ developed by Luthans, Avolio, Avey, and Norman (2007) was used as the measuring instrument for Psychological Capital. The instrument is responded to on a six point Likert scale, ranging from 1 = Strongly disagree to 6 = Strongly agree. The questionnaire measures the four dimensions of psychological capital which are: **Self-efficacy** (e.g. "I feel confident analyzing a long-term problem to find a solution"), **Hope** (e.g. "At the present time I am energetically pursuing my work goals"), **Resilience** (e.g. "I usually manage difficulties one way or another at work") and **Optimism** (e.g. "When things are uncertain for me at work, I usually expect the best"). Each of the four components: Self-efficacy, hope, resilience, and optimism are measured with six items each with the individual's level of positive PsyCap being the calculated score (Luthans et al., 2007). The PCQ was coupled from four separate scales that measure the four dimensions of PsyCap. Items 1-6 are the Self-efficacy subscale which was adapted from Parker (1998); items 7-12 are for the hope scale which was adapted from Snyder et al. (1996); items 13-18 are for resiliency and it was adapted from Wagnild and Young (1993); and for the optimism subscale, items 19-24 were drawn from (Scheier & Carver, 1985).

3.6.3.2 *Reliability and Validity of the PsyCap Questionnaire*

The PCQ-24 which is a "higher order construct" Avey, Luthans, Smith, and Palmer (2010), has undergone extensive psychometric analyzes and support from various

samples and cross cultural sectors. Avey, Nimnicht, and Graber Pigeon (2010), noted the PsyCap as a “second order factor where each item loaded onto its dimension.”

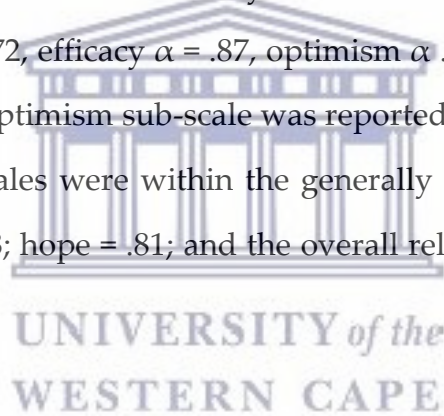
Luthans, Avolio, Avey, and Norman (2007) demonstrated the Psycap instrument with adequate confirmatory analytical structure and indicated strong internal reliability coefficients. The authors reported considerable strong internal reliability - coefficients of $\alpha = .92$. Furthermore, the internal reliability was reported for self-efficacy as .86, hope = .85, resilience = .72 and optimism = .73 with the overall PCQ as .91. Avey, Nimnicht, and Graber Pigeon (2010) and Clapp-smith, Vogelgesang, and Avey (2009) demonstrated adequate internal reliability of $\alpha = .87$.

Similarly, Liu, Chang, Fu, Wang, and Wang (2012) reported on the Chinese version of the 24-item Psychological Capital Questionnaire (PCQ) which was administered on a Chinese sample where patients and physicians were randomly selected from six large general hospitals in five cities. The total Cronbach's alpha for the four factors of PCQ (self-efficacy, hope, resilience, and optimism) was between .83 and .90 for the male physicians and between .85 and .88 for the female physicians with a summed up score of .95 for male physicians and .94 for female physicians. This was supported by Sun, Zhao, Yang, and Fan (2012) who also reported a Cronbach's alpha for self-efficacy, hope, resilience, optimism, and the total scale of .81, .82, .63, .50, and .88 for Chinese nurses, respectively. Luo and Hao, (2010) also demonstrated that the internal reliability for the total scale and subscales ranged between .71 and .93.

In the African context, a South African study, Du Plessis (2014) has confirmed the total reliability coefficients of the PCQ, $\alpha = .89$, with efficacy = .85, hope = .82, resilience = .69 and optimism = .66. Furthermore, some other South African studies have confirmed the good fit demonstrated by the original factor structure of the PCQ (Görgens-Ekermans & Herbert, 2013; Simons & Buitendach, 2013) and the four factor structure of the PCQ

(Harris, 2012). Du Plessis and Barkhuizen (2011) reported on a three factor structure of the PCQ in their 131 respondent sample which is different from the four distinct factor structure of the PCQ demonstrated by Dawkins, Martin, Scott, and Sanderson (2013) and Rego, Sousa, Marques, and Cunha (2012). These authors reported the four factor structure in a Portuguese sample which consisted of 201 employees, working in 33 organizations. A confirmatory factor analysis was used to test on how the four-factor model fits the data.

Avey, Wernsing, and Luthans (2008) reported the reliability coefficients for the four subscales as greater than .70 with the overall PsyCap instrument being .95. Similarly, Avey, et al. (2010) also reported the reliability coefficients of the PsyCap $\alpha = .93$ with hope $\alpha = .87$, resilience $\alpha = .72$, efficacy $\alpha = .87$, optimism $\alpha .78$). However, in a different study, the reliability of the optimism sub-scale was reported as relatively low: optimism = .65. The other three subscales were within the generally acceptable standards – self-efficacy = .82; resilience = .78; hope = .81; and the overall reliability at .90 (Avey, Patera, & West, 2006).



3.6.4 Psychological Climate

3.6.4.1 *Nature and Composition of the Psychological Climate Questionnaire*

The Psychological Climate Measure developed by Brown and Leigh (1996) was used to measure the psychological climate construct. This 21-item scale was conceptualized and developed based on Kahn's (1990) study of dimensions that predicted organizational factors that influenced employees' disengagement or engagement at work. The scale was developed with 6 factors namely, **supportive management** (5 items), **role clarity** (3 items), **contribution** (4 items), **recognition** (3 items), **self-expression** (4 items), and **challenge** (2 items). Examples of the six related theoretical components are: **Supportive Management** – "My manager is supportive of my ideas and ways of getting things

done”, **Role Clarity** – “The amount of work responsibility and effort expected in my job is clearly defined”, **Contribution** – “I feel like a key member of the organization”, **Recognition** – My superiors generally appreciate the way I do my job”, **Self-Expression** – “I feel free to be completely myself at work” and **Challenge** – “My job is very challenging”. The items were measured on a 7-point Likert-type scales which is anchored by strongly disagree (1) to strongly agree (7); the higher the scores, the stronger the perceptions of psychological climate attached to the respondent.

3.6.4.2 Reliability and Validity of the Psychological Climate Measure

Brown and Leigh (1996) reported a reliability coefficient of .89 for the scale and confirmed that the six first-order dimensions of the Psychological Climate Measure sufficiently substantiated the theoretical model of the Psychological Climate stated through the use of a confirmatory factor analysis (Spink, Wilson, Brawley, & Odnokon, 2013).

Initially, the psychological climate construct was termed as “synonymous with the job satisfaction construct” however, further analysis has depicted that these two constructs are interrelated and connected, thereby displaying them as separate, distinct constructs (Biswas, 2010a, 2010b).

In a 2013 study, Kataria, Garg, and Rastogi (2013) reported the internal consistency for the scale as .84. The reliability estimates for each of the subscales were above acceptable limits: supportive management – .81, role clarity - .78, contribution – .83, recognition – .82, self-expression – .79, and challenge - .87. Biswas, (2010a, 2012) also confirmed the reliability of the measure reporting the Cronbach alpha = .89 and .90 respectively.

As of date, no known study have been seen to report on the psychometric properties of the Psychometric Climate Measure (Brown & Leigh, 1996) in an African context.

3.6.5 Turnover Intention Scale

3.6.5.1 *Nature and Composition of the Turnover Intention Questionnaire*

Intention to quit was measured with the Turnover Intention Scale by Samuel (2017). It is a 6-item scale that is scored on a 6-point frequency rating scale ranging from 1 – Disagree strongly to 6 – Agree strongly.

3.6.5.2 *Reliability and Validity of the Turnover Intention Scale*

Samuel (2017) reported the value of the internal consistency of the scale, $\alpha = .92$. The psychometric properties of the Turnover Intention Scale by Samuel (2017) has not been reported in any other study to date.

3.6.6 Utrecht Work Engagement Scale

3.6.6.1 *Nature and Composition of the Utrecht Work Engagement Scale*

Work Engagement was assessed with the Utrecht Work Engagement Scale (UWES) drawn up by Schaufeli, Salanova, Gonzales-Roma, and Bakker (2002). The three dimensions of the UWES: Vigour (6 items), Dedication (5 items), and Absorption (6items) are measured with 17 items that reflect the essential dimensions of Work engagement. Typical questions denoted in the dimensions are **Vigour (VI)** – “When I get up in the morning, I feel like going to work”, **Dedication (DE)** – “I find the work that I do full of meaning and purpose”, and **Absorption (AB)** – “I am immersed in my work”. All the items are scored on a 7-point Likert rating scale ranging from 0 (never) to 6 (always - everyday). A high score signifies high levels of engagement.

3.6.6.2 *Reliability and Validity of the Utrecht Work Engagement Scale*

The UWES is a work engagement scale that has been widely used in different international studies with many studies indicating good internal consistency of the dimensions of work engagement.

The Psychometric properties of the UWES have been confirmed by many countries including South Africa (Schaufeli & Bakker, 2004). These studies reported an internal consistency of the UWES to range between $\alpha = .72 - .96$. These figures display that the internal consistencies are quite good and they exceed the generally accepted standard for existing scales of .70 (Nunnally & Bernstein, 1994). The psychometric properties reported on were for the UWES-9 (N = 12,631), UWES-15 (N =12,631) and the UWES-17 (N = 12,161) scales which signified that the short and the longer versions of the UWES met with the accepted criterion. The English version of the UWES was administered in South Africa, Canada and Australia whilst the local language versions were employed in the remaining listed countries (Schaufeli & Bakker, 2003). Subsequently, Hallberg and Schaufeli (2006) also reported on the short Swedish version of the UWES (9items) that the Cronbach's α for three subscales (Vigour, Absorption and Dedication), was over .70.

Furthermore, in three South African studies: Coetzee and Villiers (2010); Simons and Buitendach (2013); Van der Colff and Rothmann (2009), the Cronbach alpha coefficients for the three subscales varied between .85 and .95 but another study Rothmann and Rothmann Jr (2010) reported an internal consistency of $\alpha = .64$. Coetzee and Villiers (2010) obtained alpha coefficients of Vigour – .77, dedication – .88 and absorption – .83 in a South African financial institution. Van der Colff and Rothmann (2009) reported an acceptable reliability coefficient, $\alpha = .94$ among registered nurses in private and public hospitals in South Africa whilst Simons and Buitendach (2013) obtained the following

alpha coefficients for the UWES among 106 call centre employees: vigour: .90, dedication: .86, absorption – .85 with the total alpha being .95.

Confirmatory factor analysis by Schaufeli et al. (2002) demonstrated the factorial validity of the UWES. Studies from several countries have also confirmed the good fit of the three-factor structure of the data as better than that of other factor models (Rothmann & Rothmann Jr, 2010).

3.7 DATA ANALYSIS PROCEDURE

The data collected from the study was coded and captured using the Statistical Package for the Social Science (SPSS) version 24. The data was cleaned and checked for errors. This study utilized a correlational design examining the interrelationships among more than one variable. The analyses utilized in this study were: 1) Item analysis, 2) Exploratory factor analysis (EFA), 3) Confirmatory factor analysis (CFA) and 4) Structural equation modelling (SEM). Item analysis was employed to confirm the reliability of the constructs. Dimensional analysis (EFA) was carried out on each of the subscales to measure the dimensions. The aim of which was to confirm the reliability of the measuring instruments for the current sample, as well as the subscales of each instrument. Structural Equation Modelling with LISREL 8.80 was used to conduct factor analysis (CFA) and to determine the nature of the hypothesized relationships. It was utilized to assess the fit between the theoretical model and the measurement model. The Confirmatory factor analysis (CFA) was also utilized to confirm the original factor structure of the constructs. Prior to testing the comprehensive LISREL model, a confirmatory factor analysis (CFA) was used to evaluate the fit of the measurement model. Blaikie (2003) noted that the CFA allows the researcher to evaluate whether the model of relationships among the observed data is associated or interrelated as it produces series of fit indices.

3.7.1 Structural Equation Modelling (SEM)

Structural equation modelling is a collection of statistical methods designed to test a conceptual or theoretical model. It is an established “statistical technique that establishes measurement models and structural models to address complicated behavioural relationships” (Nusair & Hua, 2010). SEM provides for associations between independent and dependent variables (Tabachnick & Fidell, 2013). Hair, Black, Babin, and Anderson (2010) identifies it as a multivariate technique that allows for a simultaneous examination of the interrelationships between the measured variables and the latent variables. It is a large sample technique that helps to explain the patterns of covariances found amongst the observed variables in terms of the relationships hypothesised by the measurement and structural models (Diamantopoulos & Siguaaw, 2000). Furthermore, SEM is a group of “statistical models” that proffer explanations among a large sample of multiple variables by examining the structure of the relationships between those variables (Hair et al., 2010). The authors indicated that though several names (LISREL, Latent Variable Analysis, Covariance Structure Analysis, AMOS) have been previously used by different researchers, there are, however, 3 identifiable features that distinguish all structural equation models. They are – 1) An assessment of multifarious, interrelated, dependent relationships; 2) The capacity to represent unobserved concepts in the dependent relationships and justify the unresolved measurement errors; and 3) The creation of a model that explains the complete array of relationships.

Kelloway (1998) clarified that Structural equation modelling is highly useful because (1) it allows researchers to conduct confirmatory factor analyses by evaluating the measurement properties of the scales used, (2) SEM allows for the concurrent analysis of both the research questions and the predictions, and 3) The techniques utilized by

SEM takes into consideration the specification and testing of complex path models. This enables the inclusion and understanding of highly complex processes.

3.8 INTERPRETING THE DATA ANALYSIS ITEMS

3.8.1 Item analysis

Confirming the reliability of scales used for a study is very crucial as it signifies the degree to which all the items in the scale are measuring the same underlying construct. It suggests that the scale is free from random error (Pallant, 2016). The reliability of a measuring instrument indicates the extent to which the scale consistently reflects the construct that it is measuring. If a scale is administered on an individual at two different points, it is envisaged that the items on the scale should consistently produce similar results under consistent conditions. In this study, the researcher verified the internal consistency of the instruments with the Cronbach's alpha coefficient which is one of the mostly used indicators for ascertaining the reliability of a scale. The Cronbach alpha coefficient of a scale ranges between 0 and 1, the lower the value, the lower the reliability and vice-versa. It is, however, recommended that the Cronbach alpha coefficient values should be above .70 (DeVellis, 2016; Nunnally, 1967). Furthermore, Cronbach alpha values are determined by the number of items in the scale. Therefore, when a scale has fewer items than 10, it is likely that the Cronbach alpha would be of a smaller value. In that case, it may therefore be appropriate to compute and report the mean inter-item correlation (Pallant, 2016). Briggs and Cheek (1986) suggested that the mean inter-item correlation value should range between .20 and .40. An item is excluded from further analyses if the item-total correlation value is less than .30 as deleting that value should produce a significant increase in the reliability coefficient of the scale (Pallant, 2016).

Since the core intent of conducting an item analysis on a set of data is to boost the homogeneous nature of the components of the subscale, it is essential that this process is duly followed so as to improve on the content validity of the subscale. The Item analysis was conducted using the reliability-analysis procedure available in SPSS version 24. Using this procedure, the reliability statistics, item-total correlation, the squared multiple correlation, the change in subscale variance if the item is deleted, the change in subscale reliability when the item is deleted, the inter-item correlations, item mean and the inter-item correlation matrix were calculated. Nunnally's (1967) study suggests acceptable levels of reliability for the scales. This is indicated in Table 3.2.

TABLE 3.2

General Guidelines for Interpreting Reliability Coefficients

| Reliability coefficient value | Interpretation |
|-------------------------------|--------------------------------|
| 0.9 and above | excellent |
| 0.80 – 0.89 | good |
| 0.70 – 0.79 | adequate |
| below 0.70 | may have limited applicability |

Nunnally, J. C (1967). *Psychometric Theory*.

3.8.2 Exploratory Factor Analysis

Factor analysis is a statistical procedure used in identifying small number of factors that can be used to represent relationships among sets of interrelated variables. Factor analysis takes large number of variables and effortlessly simplifies them into fewer comprehensible variables that will be easy to analyse and interpret (Field, 2009). The highest amount of variance that is inherent in a correlation matrix is explained when variables are reduced from a group of associated variables to a lesser group of factors through factor analysis. Consequently, this process is catered for when resulting

underlying dimensions are clustered together in meaningful ways. Data reduction applies when there are variables that correlate favourably with a group of variables but do not favourably correlate with some other group of variables. Thus factor analysis attempts to assemble inter-correlated, inter-related variables, bringing them together under more a more general, unifying variable.

3.8.3 Kaiser-Meyer-Olkin (KMO) Test for Sampling Adequacy

The Kaiser-Meyer-Olkin (KMO) is a measure used to determine how best the data is suitable for factor analysis. It tests for sampling adequacy for each of the imputed variables and the overall sum of the variables (Cerny & Kaiser, 1977; Kaiser, 1974). It measures the proportion of the common variance that exists among the variables. In essence, the more the variables share a common factor, the smaller the partial correlations and then the closer the KMO is to 1.

To determine whether the sample of the data is adequate for factor analysis, the value of the Kaiser-Meyer-Olkin (KMO) must be greater than 0.50. As a “rule of thumb” the KMO’s values range between 0 and 1, therefore; Kaiser (1974) suggests the following KMO values:

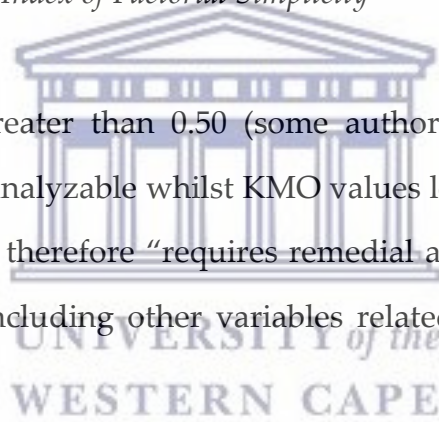
Table 3.3

General Guidelines for Interpreting KMO Values

| KMO Values | Interpretation |
|-------------|----------------|
| 0.00 – 0.49 | Unacceptable |
| 0.50 – 0.59 | Miserable |
| 0.60 – 0.69 | Mediocre |
| 0.70 – 0.79 | Middling |
| 0.80 – 0.89 | Meritorious |
| 0.90 – 1.00 | Marvelous |

Kaiser, H. F (1974, p. 35). *An Index of Factorial Simplicity*

Essentially, KMO values greater than 0.50 (some authors suggest 0.50) are termed adequate and data is factor analyzable whilst KMO values lesser than 0.50 is considered unfit for factor analysis and therefore “requires remedial action, either by deleting the offending variables or by including other variables related to the offenders” (Kaiser, 1974).



3.8.4 Bartlett’s Test of Sphericity

The Bartlett’s Test of Sphericity, is a measure that “tests the null hypothesis that the original correlation matrix is an identity matrix” (Field, 2009, p. 660). This depicts that the diagonal section in the matrix contains (1s) and all the off-diagonal elements are zero’s (Tabachnick & Fidell, 2013). The Bartlett’s Test of Sphericity must be statistically significant – not more than .05 level.

3.8.5 Communalities

The Communality table is the percentage of a distinct variable that is attributable to other variables. It explains the strength of the individual item vis-à-vis the other factors. Field (2009) explained further that every variable has both a “common variance” and “unique variable”. Communality therefore can be termed as the “proportion of common variance present in a variable.” Communality explains the portion of variance that can be accounted for by extracted factors. The communality table presents the values that should be included for further analysis. If any of these values do not reach the acceptable cut-off level (0.5), these values should be considered unusable for the purpose of factor analysis.

3.8.6 Correlation Matrix

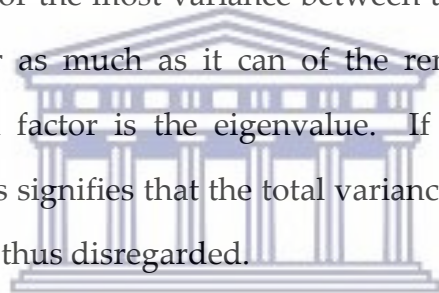
The Correlation matrix is an arrangement of the inter-correlations that exists between the variables under study (Field, 2009). It is a display of the collection of a set correlation coefficients between one variable and other variables in the analysis. The correlation coefficient between a variable and itself is always 1, thereby exhibiting a diagonal sequence in 1's. The correlation coefficients being displayed beside and below the displayed 1's reflect the same numbers.

It is important to note that variables with scores lesser than 0.50 should probably be dropped and the variables of the right and left side of the off-diagonal variables (Sig. 1-tailed) should be zero or very close to zero (Field, 2009). It is possible to decrease the dimensionality that exists in the matrix if variables that correlate highly with a group of other variables are grouped together, whilst variables that correlate badly with other variables are excluded from such groups. The variables that inter-correlate highly with each other are said to measure one and the same underlying variable, which is referred to as a “factor”.

3.8.7 Total Variance Explained

This table can be considered as one of the most important parts in the Factor analysis. The items listed in this table are enumerated in their order of importance or potency of loading and not based on the actual listing when the factors were recorded. Only the factors with large eigenvalues (greater than 1 in the Total column) are retained (Field, 2009).

Eigenvalues are the variances of the factors. An eigenvalue reflects the “extracted factors whose sum should be equal to number of items which are subjected to factor analysis”. The first factor in the “Total column” always has the highest eigenvalue since this factor always accounts for the most variance between the factors. Each consecutive factor will then account for as much as it can of the remaining variance. The total variance explained by each factor is the eigenvalue. If any of the factors denotes eigenvalues that are less, this signifies that the total variance explained is insufficient to indicate a unique factor, it is thus disregarded.



UNIVERSITY of the
WESTERN CAPE

3.8.8 Scree Plot

This simple visual representation allows the researcher to identify at a glance the number of factors to retain. This graph presents the eigenvalues against the factors in the data. The significant point of the graph is to identify at which point the curve straightens out or at what point the sharp decline or “point of inflexion” (Cattell, 1966, 2010). Field (2009) pointed out that when the eigenvalues are plotted, “the relative importance of each factor becomes apparent.” The graph explicitly depicts the factors with relatively high or low eigenvalues. The point of inflexion acts as a cut-off point where only the factors to the left of the inflexion are retained for the purpose of factor analysis (Field, 2009). Stevens (2012) argues that with a sample size of 200, the graphical presentation for the purpose of factor selection from a Scree plot could be termed fairly

dependable, however, it should be emphasized that factor selection should not be solely based on the Scree plot Field (2009) as this could be misleading.

3.9 MODERATING AND MEDIATING EXPLAINED

Mediating variables act as intermediaries or middlemen between the independent variable and the dependent variable. Mediating variables describe how psychological significance is explained by external events (Baron & Kenny, 1986; Namazi & Namazi, 2016).

Moderating variables on the other hand, act as influencers of the relationship between the independent variable (IV) and the dependent variable (DV). The moderator measures the strength of the relationship and influence the independent variable has on the dependent variable. Moderating variables help to modify the relationship that exists between the (IV) and the (DV). Baron and Kenny (1986) indicated that moderators are qualitative or quantitative variables that affect the direction between the IV and DV.

The model examined in this study, explicates psychological capital and psychological climate as mediating variables between authentic leadership and work engagement and explicates turnover intention as a moderating variable between authentic leadership and work engagement.

3.10 INTERPRETING THE STRUCTURAL MODEL MODIFICATION INDICES

The purpose of assessing the structural model is to verify whether the theoretical relationships specified at the conceptualisation stage can be corroborated by the data. At this point, the focus is on the associations that exist between the various endogenous

(ξ) and exogenous (η) variables. The process of assessing a structural model entails an in-depth analysis of the freed elements of the γ and β matrices. It must also be noted that even though a LISREL model or SEM fits the data, it provides some inconclusive evidence that the data supports the path-specific substantive hypotheses.

According to Diamantopoulos and Siguaw (2000), there are four crucial components that are of paramount importance in assessing the structural model.

1. It is vital to evaluate the “Greek symbols” that are parameters representing the paths between the latent variables so as to ascertain the degree of consistency with the nature of the causal effect hypothesised to exist between the latent variables.
2. It is crucial to determine if the parameter estimates are significant ($p < .05$) or not.
3. It is essential to assess the magnitudes of the estimated (standardised) parameters indicating the strength of the hypothesised relationships.
4. It is imperative to assess the squared multiple correlations (R^2), which indicate the amount of variance in each endogenous latent variable that is explained by the latent variables linked to it in the hypothesised structural model.

3.10.1 The Gamma Matrix

The unstandardized γ matrix is used to assess the significance, strength and directional relationships that exists between the exogenous latent variables - ξ and the endogenous latent variables - η . The parameters are significant if the conditional probability associated with the sample parameter estimates under the stated null hypothesis is sufficiently small (i.e., if $t > |1.96|$) (Diamantopoulos & Siguaw, 2000) for two tailed relationships and $t > |1.65|$. When γ is significant, it implies that the corresponding null hypothesis is rejected in favour of the alternative hypothesis, provided that the sign of the γ estimate corresponds to the effect hypothesised under the alternative hypothesis.

Rejection of the path-specific null hypothesis in turn implies support for the path-specific substantive hypothesis. The strength of the statistically significant ($p < .05$) γ estimates was determined by examining the completely standardised γ matrix.

3.10.2 The Beta Matrix

The unstandardized β matrix is used to evaluate the significance of the relationships between the endogenous variables. The unstandardized β estimates are significant if the conditional probability associated with the sample parameter estimates under the stated null hypothesis is sufficiently small (i.e., if $p < 0.05$) (Diamantopoulos & Siguaaw, 2000). When β is significant, it implies that the corresponding null hypothesis is rejected in favour of the alternative hypothesis, provided that the sign of the β estimate corresponds to the effect hypothesised under the alternative hypothesis. Rejection of the path-specific null hypothesis means that the path-specific substantive hypothesis is corroborated. The strength of the statistically significant ($p < .05$) β estimates was determined by examining the completely standardised β matrix.



3.11 LISREL FIT STATISTICS

A spectrum of fit indices is used to assess the model fit. These generally fall into three main categories namely: model fit, model comparison and model parsimony. The model fit evaluates the “degree to which the sample variance-covariance data fit the structural equation model” whilst the model comparison compares a “proposed model with a null model”. The model parsimony identifies the “number of estimated parameters required to achieve a specific model fit” (Schumacker & Lomax, 2016). The LISREL programme version 8.80 (Jöreskog & Sörbom, 2006b), reports 18 indices of model fit, of which four relate to model fit, three relate to model comparison and two relate to model parsimony.

3.11.1 Model Fit Criteria

The Model Fit indices or Absolute fit indices Hair, Black, Babin, and Anderson (2010) ascertain the extent to which the sample variance or sample covariance data fits into the structural equation model. These indices indicate the differences between the implied covariance matrix (Σ) and the sample covariance matrix (S). The commonly used model-fit criteria are the chi-square (X^2), the goodness of fit index (GFI), the adjusted goodness of fit index (AGFI), the root mean square error of approximation (RMSEA) and the root mean square residual index (RMR) (Jöreskog & Sörbom, 2006a; Schumacker & Lomax, 2016).

3.11.2 The Chi-square Statistic

The chi-square statistic (χ^2) which is also denoted as the Minimum Fit Function Chi-Square traditionally measures the overall model fit in the covariance structure models (Diamantopoulos & Sigua, 2000). It indicates whether a perfect fit exists or not. This is exhibited in the null hypothesis. The null hypothesis signifies if a perfect model fit exists with the population data. The chi-square statistics therefore determines whether there is congruence or incongruence existing between the observed and reproduced sample covariance matrices. The χ^2 value is the only statistical test that portrays the differences that might exist between matrices in SEM (Hair et al., 2010).

A significant χ^2 value indicates that the implied covariance matrix is different from the observed covariance matrix whilst a non-significant χ^2 index portrays that the two matrices are alike which means that that the implied model considerably replicates the sample or observed variance or covariance (Schumacker & Lomax, 2016). It is important for the researcher to obtain a non-significant χ^2 value in relation to the degrees of freedom. However, statistical significance in the χ^2 value could signify that the observed difference could be as a result of sampling variations (Schumacker & Lomax, 2016).

The value of the Minimum Fit Function Chi-Square is computed as $(N-1) F_{\min}$ in which N denotes the sample size and F_{\min} (minimum fit function chi-square) denotes the value of the fitting function at convergence (Diamantopoulos & Siguaw, 2000). A chi-square statistic is used to test the exact fit null hypothesis - $H_0: \Sigma = \Sigma(\theta)$. Therefore, a chi-square value is termed statistically significant when the null hypothesis is rejected as this implies an imperfect model fit and will most probably warrant a rejection of the model. If an exact fit null hypothesis (H_{01a}) is observed, then it implies that the model fits the data in the population perfectly. It is noteworthy; however, that, even if the differences in a covariance matrix remained constant, the χ^2 value would still increase if the sample size increases. A very large or small sample size could resort to a model rejection because the chi-square does not have the potential to discriminate between a good fit and a poor fit (Hair et al., 2010; Hooper, Coughlan, & Mullen, 2008).

Mels (2003) however suggested that the Satorra Bentler chi square is better suited to multivariate non-normal data. This chi-square results from the use of robust maximum likelihood parameter estimation. The usual normal-theory chi-square statistic is divided by a scaling correction to better approximate chi-square under non-normality.

3.11.3 The Goodness-of-fit (GFI) and the Adjusted Goodness-of-fit Index (AGFI)

The goodness-of fit index (GFI) indicates the relevant quantity of variances and covariances accounted for by the model. This depicts how closely the model comes to flawlessly reproducing the observed covariance matrix. The GFI is usually recommended as the most reliable measure of the model fit (Diamantopoulos & Siguaw, 2000).

The goodness-of fit statistic by Jöreskog and Sörbom (2003), serves as a possible option for the Chi-square statistics. The adjusted goodness-of-fit index (AGFI) can be described as the GFI that is adjusted for the degrees of freedom in the model. The parsimony goodness-of-fit index (PGFI) on the other hand allows for a different kind of adjustment that takes model intricacies into account (Diamantopoulos & Siguaaw, 2000). The GFI and AGFI indices can be utilized to compare the fit of a model using separate data or to compare the fit between two different alternative models using the same data (Schumacker & Lomax, 2016). The values of the GFI and AGFI ranges between 0 and 1 with values $> .90$ is usually considered as indicating an acceptable fit (Diamantopoulos & Siguaaw, 2000). Acceptable values for the PGFI however range much more lower than the GFI and AGFI with values within the $.50$ range (Mulaik et al., 1989).

3.11.4 Root Mean Square Error of Approximation (RMSEA)

The root mean square error of approximation (RMSEA) is generally regarded as one of the most informative fit indices because it depicts how well a model with an unknown but optimally chosen parameter value fits the population covariance matrix if available. It also tests for the closeness of fit in the null hypothesis (Diamantopoulos & Siguaaw, 2000). The RMSEA takes into account the model of degrees of freedom and the sample size of a data. The degrees of freedom is categorised as a measure of model complexity because the more the degrees of freedom, the higher the number of variable relationships in the model (Schumacker & Lomax, 2016). When assessing the RMSEA, values less than $.05$ are indicative of good fit, those between $.05$ and under $.08$ are of reasonable fit, values between $.08$ and $.10$ indicate a mediocre fit whilst values $>.10$ are regarded as poor fit (Diamantopoulos & Siguaaw, 2000).

3.11.5 Root Mean Square Residual (RMR) and Standardised Root Mean Square Residual (SRMR)

The root mean squared residual (RMR) is the square root of the mean of squared residuals that is an average of the residuals. Where a residual is an error in prediction for each covariance (Hair et al., 2010). It presents the average value of the difference between the sample covariance (variance) and a fitted (model-implied) covariance (variance). The RMR is therefore the summary measure of fitted residuals.

A major drawback, however, that arises with the use of fitted residuals and therefore the RMR statistic is that their size varies with the unit of measurement and therefore the RMR varies from variable to variable. Nonetheless, this snag can be resolved by focusing on the standardised residuals. The standardized residuals are the fitted residuals divided by the estimated standard errors. A summary measure of standardised residuals is the standard root mean residual (SRMR) with values below .05 indicating an acceptable fit (Diamantopoulos & Siguaaw, 2000). The SRMR is useful for comparing fit across models and assessing the practical significance of the magnitude of the SRMR in light of the research objectives and the observed or actual covariances. High values are indicative of poor fit (Hair et al., 2010).

3.12 MODEL COMPARISON CRITERIA

These next set of fit indices depicts a comparison between alternative models. It indicates how better a model fits when compared to a standard or alternative baseline model. Kelloway (1998) describes the Model Comparison indices as the Relative fit indices or the Incremental fit indices (Hair et al., 2010) and these indices seeks to discover whether the considered model can be termed better than another competing or baseline model. The most common baseline model is the null model that assumes that

all observed variables are uncorrelated. These indices are the Tucker-Lewis index (TLI) or the Bentler-Bonett non-normed fit index (NNFI), the Bentler-Bonett normed fit index (NFI) and the Comparative fit index (CFI) (Schumacker & Lomax, 2016). The NNFI and the CFI are the most widely reported and has been recommended to be relied upon for fit assessment (Diamantopoulos & Siguaw, 2000).

3.12.1 The Tucker-Lewis Index (TLI) or the Non-normed Fit Index (NNFI)

The Tucker-Lewis index (also known as the non-normed fit index) compares alternative models or compares a proposed model against a null model. The NNFI is scaled from 0 (no fit) to 1 (perfect fit) (Schumacker & Lomax, 2016), although at times it yields values that exceed the 1 cut-off mark (Diamantopoulos & Siguaw, 2000). The closer the value of the NNFI is to 1, the more indication of a good fit it represents, although the complication that may occur with the NNFI is that of its non-normed nature, it could be difficult to interpret values when they exceed 1. Though the NNFI is conceptually similar to the NFI, it varies in that the NNFI is a comparison of the normed chi-square values with the null and specified model which takes into consideration the model complexity indicating that it regulates the NFI by incorporating the degrees of freedom in the model (Hair et al., 2010; Tabachnick & Fidell, 2013). Tabachnick and Fidell (2013) point out that the NNFI could indicate a poor fit when small samples are used even though other parameters are indicative of a good fit.

Another problem with the NNFI is that due to its non-normed nature, values can go above 1.0 and can thus be difficult to interpret (Byrne, 2012). Researchers usually interpret NNFI values greater than .90 as reflecting acceptable fit (Diamantopoulos & Siguaw, 2000).

3.12.2 The Normed Fit Index

The normed fit index (NFI) is one of the original incremental fit indices that endeavour to rescale the chi-square values ranging between 0 - no fit and 1 - perfect fit. A model with a perfect fit thus indicates an NFI value of 1. It is the ratio of the difference between the chi-square value (χ^2) of the fitted model and the chi-square value (χ^2) of the null model divided by the chi-square value (χ^2) of the null model (Schumacker & Lomax, 2016). However, one of the demerits of the NFI is that it can be affected by sample size in that when models are complex, it will generate higher index values which will artificially inflate the estimate of the model fit (Hair et al., 2010). The model could also be accurate yet the NFI value may not reach the (1) perfect fit mark. This issue is however sorted by the NNFI (Bentler, 1990).

3.12.3 The Comparative Fit Index (CFI)

The comparative fit index (CFI) is a normed incremental fit index which provides an improvement on the NFI by taking sample size into consideration. It assesses the relative fit to other models. Its values range between 0 and 1 with higher values of greater than .90 indicating a good model that fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). The CFI is one of the most widely used indices because of its countless excellent properties especially with regards to its insensitivity to model complexity. Similar to the NFI, the CFI assumes a base-line model in which all latent variables are structurally unrelated.

3.12.4 The Relative Fit Index (RFI)

The Relative Fit Index (RFI) compares the observed fit resulting from testing a specified model to that of a null model. Similar to other incremental fit indices, values generally range between 0 and 1 with higher values indicative of a better fit. RFI values lower than .90 are indicative of a poor fit (Hair et al., 2010).

3.13 MODEL PARSIMONY

These group of indices refer to the number of estimated parameters that provides information basically on which model can be considered the best among a set of competing models especially when considering its relative fit to its complexity. Parsimony fit indices are not useful in assessing the fit of a single model, but quite appropriate for comparisons between the fit of two models. Although it is apparent that a parsimony index can proffer constructive information that would help to assess competing model, however Hair, Black, Babin, and Anderson (2010) states that it should not be totally trusted because these indices tend to favour parsimonious models more than any other model. The Parsimony Normed Fit Index (PNFI) has been termed as the most widely accepted parsimony fit index.

3.13.1 The Parsimony Normed Fit Index (PFNI)

The Parsimony Normed Fit Index (PNFI) alters the NFI measure by taking into account the degrees of freedom utilized in obtaining a given level of fit. The PNFI compares models with different degrees of freedom (Schumacker & Lomax, 2016).

3.14 CONCLUSION

The methodology utilized for the study was outlined in this chapter. This comprises of the research design, data collection techniques, statistical methods, ethical considerations, the psychometrical details of the research instruments used as well as the procedure put in place to analyze the data collected. The SEM indices utilized were also discussed. Subsequently, the next chapter builds on this chapter by presenting the results obtained from the study.

CHAPTER 4

RESEARCH RESULTS

4.1 INTRODUCTION

In this chapter, the research results are presented and explained. The issues around missing values are discussed and the missing values are accounted for. LISREL 8.80 software was used to perform the multiple imputation that addressed the missing values problem. Multiple imputation addresses the missing values by replacing the missing value with an average derived for the variable. The final sample size used in the study is 212 cases received from the Nigerian sample. The item and dimensional analysis results of the scales are presented. Confirmatory factor analysis was also conducted on each of the scales used in the study.

4.2 MISSING DATA

Missing data or values are common when analyzing multivariate data collected through questionnaires (Hair et al., 2010). Missing values can pose difficulties and make a significant impact on the results obtained and deductions drawn from the data. This problem is mostly detected in studies that use self-reporting instruments. Missing values arise when some of the questions were omitted or not responded to by the respondents. Missing values can distort results and inferences that would be made based on the results received. It has been observed that one of the main reasons for incomplete items in the questionnaire is the lack of adequate understanding of the question that is being posed to the respondents. In online surveys, as was initially considered by the researcher, the respondents could be forced to respond to an item before moving to the next item, however, with paper surveys, this procedure cannot be

put in place. Therefore, to ensure that the missing values do not negatively impact on the sample, the problem of missing values must be addressed. Missing values allow the researcher to make several choices like: substitution, imputation and model based procedures (Hair et al., 2010; Vieira, 2011). Alternatively, the researcher could deal with the missing data values by using a list wise case deletion approach (Vieira, 2011). This approach will generate only a set of data that contains the complete data thereby completely eliminating the missing variables or respondents with excessive levels of missing data. However, the challenges that could occur with this approach are that bias may be introduced into the study (Du Toit & Mels, 2002) and the researcher would most probably be left with too few complete data cases as to make the data analyzable and generalizable. Hair et al., (2010) suggests that list wise case deletion is considered suitable if the quantity of the missing variables is not ridiculously high.

In the present study, the missing information was addressed through the use of multiple imputations (Jöreskog & Sörbom, 2006a). One data case was completely deleted as it contained a lot of missing values. The 212 data cases were therefore retained and used for statistical analysis through the multiple imputations procedure - a technique available in LISREL 8.80. Despite several available options, this procedure was considered the most suitable for solving the “missing values” challenge because of the following considerations. Du Toit and Mels (2002) explained that the most efficient SEM strategy for solving the challenge of “missing values” in a normally distributed data is to use the Full information Maximum Likelihood (FIML) procedure. The FIML uses the estimated technique for imputation procedures. “The multiple imputation procedures available in LISREL 8.80 assume that the values are missing at random and that the observed variables are continuous and follow a multivariate normal distribution” (Mahembe, 2014). This technique allowed the missing values to be substituted with values derived from averages with the aid of simulation (Jöreskog &

Sörbom, 2006a; Rubin, 1987). The multiple imputation technique allowed the researcher to retain as many data cases as is deemed possible because that ensured that adequate sample size of a minimum size of 200 could be reached. Diamantopoulos and Siguaaw (2000) stated that a 200 sample size would suffice for most SEM analyses.

4.3 ITEM ANALYSIS

4.3.1 Reliability Analysis of the Measuring Instruments

Item analysis was conducted to identify and to exclude items that do not contribute to the internal consistency of the latent variables measured by these instruments. Determining the reliability of scales – as to whether the measuring instruments would consistently produce the same results is a crucial step that should be taken as a prelude to data analysis. The reliability analysis was conducted by calculating the Cronbach's alpha coefficient on all the measuring instruments.

Reliability analyses was performed on the Authentic Leadership Inventory (ALI), the Psychological Capital Questionnaire (PCQ), the Psychological Climate Questionnaire (PCQ), the Turnover Intention (TI), and the Utrecht Work Engagement Scale (UWES) using the SPSS Reliability technique available in SPSS version 24 (SPSS Inc., 2016).

4.3.1.1 Reliability Analysis of the Authentic Leadership Inventory (ALI)

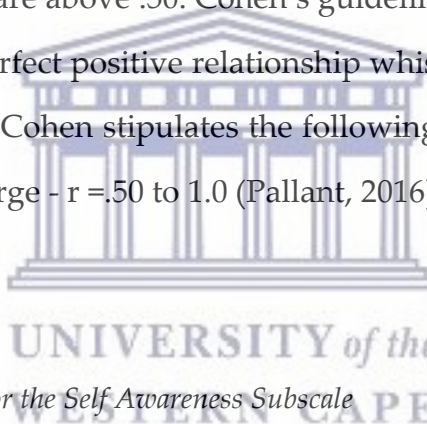
The Authentic Leadership Inventory (ALI) by (Neider & Schriesheim, 2011) is a self-report measure that contains 16 items categorised into 4 subscales. The reliability analysis was separately conducted for each of the 4 subscales. The Reliability Statistics, the item-total statistics, item statistics and the item-total correlated matrix will be presented and reported on.

Self-Awareness

The *Self-Awareness subscale* has an internal consistency coefficient of $\alpha = .713$ which is considered satisfactory (Nunnally, 1967). The deletion of any item would further reduce the reliability coefficient below the obtained .713. The corrected item-total correlation values shown in the Item-Total Statistics table indicated the degree to which each item on the scale correlated with the total score. Pallant (2016) ascertained that if values lesser than .30 are obtained, it thus indicated that the item was probably assessing a different concept from the scale being measured. As shown in Table 4.1, all the corrected item-total correlation values were more than .30 (Pallant, 2016). The inter-item correlation matrix suggests that the strength of the relationships among the variables is strong as most of the values are above .50. Cohen's guidelines propose that a correlation of 1 implies that there is a perfect positive relationship whilst the correlation of 0 implies that there is no relationship. Cohen stipulates the following guidelines: Small - $r = .10$ to $.29$, medium - $r = .30$ to $.49$, large - $r = .50$ to 1.0 (Pallant, 2016).

TABLE 4.1

The Reliability Analysis Output for the Self Awareness Subscale



Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|--|-----------------|
| .713 | .716 | 4 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--------|----------------------------------|--------------------------------------|--|------------------------------------|--|
| Auth1 | 11.17 | 4.745 | .484 | .235 | .662 |
| Auth5 | 11.37 | 4.898 | .458 | .210 | .677 |
| Auth9 | 11.17 | 4.862 | .541 | .306 | .627 |
| Auth13 | 10.90 | 5.032 | .524 | .291 | .638 |

Inter-item Correlation Matrix

| | Auth1 | Auth5 | Auth9 | Auth13 |
|--------|-------|-------|-------|--------|
| Auth1 | 1.000 | .355 | .388 | .383 |
| Auth5 | .355 | 1.000 | .372 | .345 |
| Auth9 | .388 | .372 | 1.000 | .478 |
| Auth13 | .383 | .345 | .478 | 1.000 |

Relational Transparency

A Cronbach alpha of .659 was obtained for the *Relational Transparency* subscale which is considerably lower than the critical threshold value of .70 which Nunnally (1967) and Pallant (2016) deems as adequate. All the corrected item-total correlations were greater than .30 which is satisfactory (Pallant, 2016). Since the Cronbach alpha results if deleted from the item-total statistics were lower than the obtained Cronbach alpha, it is indicative that any item deleted would not improve the figure of $\alpha = .659$. All the items were therefore retained. The output is shown in Table 4.2.

TABLE 4.2*The Reliability Analysis Output for the Relational Transparency Subscale***Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|--|-----------------|
| .659 | .677 | 4 |

Item-total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Auth2 | 10.94 | 5.091 | .419 | .219 | .612 |
| Auth6 | 11.70 | 3.795 | .409 | .176 | .640 |
| Auth10 | 11.17 | 4.258 | .487 | .244 | .558 |
| Auth14 | 11.12 | 4.654 | .496 | .285 | .562 |

Inter-item Correlation Matrix

| | Auth2 | Auth6 | Auth10 | Auth14 |
|--------|-------|-------|--------|--------|
| Auth2 | 1.000 | .251 | .297 | .440 |
| Auth6 | .251 | 1.000 | .377 | .296 |
| Auth10 | .297 | .377 | 1.000 | .402 |
| Auth14 | .440 | .296 | .402 | 1.000 |

Internalized Moral Perspective

The *Internalized Moral Perspective subscale* returned an internal consistency coefficient of $\alpha = .578$. This figure is considerably below the critical cutoff point of .70 which is considered appropriate for this study (Nunnally, 1967; Pallant, 2016). Only three of the corrected item-total correlations were larger than .30, Pallant (2016) indicating that the items correlated with the total score whilst item Auth7 marginally missed the .30 cut-off

level (Pallant, 2016). The item-total statistics also indicated that the Cronbach alpha would only increase to .580 if item Auth7 is deleted. Apparently, the increase in the alpha value is so minimal that it nullifies any considered merit of deleting item Auth7. The limited number of items in the subscale also stands restricts the deletion of any item. Therefore, all the items under the subscale were retained. The output is shown in Table 4.3.

TABLE 4.3

The Reliability Analysis Output for the Internalized Moral Perspective Subscale

| Reliability Statistics | | | | | |
|-------------------------------|------------------|--|-----------------|--|--|
| | Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items | | |
| | .578 | .576 | 4 | | |

| Item-total Statistics | | | | | |
|------------------------------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
| Auth3 | 11.13 | 4.491 | .342 | .164 | .521 |
| Auth7 | 11.14 | 4.672 | .262 | .093 | .580 |
| Auth11 | 11.33 | 3.883 | .410 | .168 | .464 |
| Auth15 | 11.16 | 3.905 | .432 | .199 | .446 |

| Inter-item Correlation Matrix | | | | |
|--------------------------------------|-------|-------|--------|--------|
| | Auth2 | Auth6 | Auth10 | Auth14 |
| Auth3 | 1.000 | .080 | ..280 | .362 |
| Auth7 | .080 | 1.000 | .263 | .223 |
| Auth11 | .280 | .263 | 1.000 | .310 |
| Auth15 | .362 | .223 | .310 | 1.000 |

Balanced processing

Balanced Processing subscale has a Cronbach Alpha of .747 which is above the .70 threshold and thus considered satisfactory (Nunnally, 1967; Pallant, 2016). The corrected item-total correlation indicated that the items all correlated satisfactorily above .30 with the total score (Pallant, 2016). All the items reported a low squared multiple correlation which indicates that they share to a limited degree a common source of variance. None of the items were identified as problematic.

TABLE 4.4

The Reliability Analysis Output for the Balanced Processing Subscale

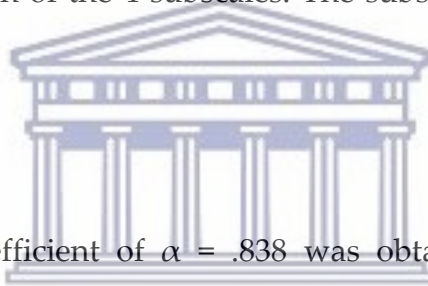
| Reliability Statistics | | | | | |
|------------------------|--|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items | | | |
| .747 | .748 | 4 | | | |
| Item-total Statistics | | | | | |
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
| Auth4 | 11.04 | 6.221 | .495 | .254 | .715 |
| Auth8 | 10.84 | 5.971 | .539 | .308 | .691 |
| Auth12 | 10.59 | 5.958 | .579 | .359 | .669 |
| Auth16 | 10.93 | 5.768 | .556 | .327 | .681 |

Inter-item Correlation Matrix

| | Auth2 | Auth6 | Auth10 | Auth14 |
|--------|-------|-------|--------|--------|
| Auth4 | 1.000 | .403 | .355 | .425 |
| Auth8 | .403 | 1.000 | .490 | .382 |
| Auth12 | .355 | .490 | 1.000 | .499 |
| Auth16 | .425 | .382 | .499 | 1.000 |

4.3.1.2 Reliability analysis of the Psychological Capital Questionnaire (PCQ)

The 24-item PCQ by Luthans, Avolio, Avey, and Norman, (2007) is a self-report scale that is categorised into 4 subscales with 6 items each. The reliability analysis was separately conducted for each of the 4 subscales. The subscales are: self-efficacy, hope, resilience and optimism.



Self-Efficacy

An internal consistency coefficient of $\alpha = .838$ was obtained from the Self-efficacy subscale. The corrected item-total correlation signified that that all items correlated with the total score with figures being above 0.30 (Pallant, 2016). There will be no increase in the alpha value if any of the items were deleted. The inter-item correlation matrix suggests that the strength of the relationships among the variables is strong as most of the values are above .50. Cohen's guidelines propose that a correlation of 1 implies that there is a perfect positive relationship whilst the correlation of 0 implies that there is no relationship.

TABLE 4.5*The Reliability Analysis Output for the Self Efficacy Subscale***Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|---|-----------------|
| .838 | .843 | 6 |

Item-total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---------|----------------------------------|-----------------------------------|--|------------------------------------|--|
| PsyCap1 | 16.64 | 9.664 | .516 | .341 | .830 |
| PsyCap2 | 16.74 | 9.001 | .653 | .475 | .805 |
| PsyCap3 | 16.71 | 9.012 | .667 | .510 | .802 |
| PsyCap4 | 16.71 | 8.805 | .712 | .542 | .793 |
| PsyCap5 | 16.92 | 8.766 | .532 | .352 | .834 |
| PsyCap6 | 16.74 | 9.086 | .638 | .423 | .807 |

Inter-item Correlation Matrix

| | PsyCap1 | PsyCap2 | PsyCap3 | PsyCap4 | PsyCap5 | PsyCap6 |
|---------|---------|---------|---------|---------|---------|---------|
| PsyCap1 | 1.000 | .548 | .381 | .448 | .266 | .387 |
| PsyCap2 | .548 | 1.000 | .553 | .546 | .359 | .482 |
| PsyCap3 | .381 | .553 | 1.000 | .654 | .413 | .517 |
| PsyCap4 | .448 | .546 | .654 | 1.000 | .506 | .494 |
| PsyCap5 | .266 | .359 | .413 | .506 | 1.000 | .518 |
| PsyCap6 | .387 | .482 | .517 | .494 | .518 | 1.000 |

Hope

A satisfactory Cronbach alpha of .862 was obtained for the Hope subscale. All the corrected item-total correlations were much higher than .30. This is proper and it proves that all the items correlated with the total score. None of the items were flagged as being problematic.

TABLE 4.6

The Reliability Analysis Output for the Hope Subscales

| Reliability Statistics | | | | | |
|-------------------------------|--|-----------------|--|--|--|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items | | | |
| .862 | .864 | 6 | | | |

| Item-total Statistics | | | | | |
|------------------------------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
| PsyCap7 | 17.10 | 7.075 | .642 | .461 | .842 |
| PsyCap8 | 17.00 | 7.014 | .700 | .512 | .831 |
| PsyCap9 | 16.98 | 7.407 | .642 | .421 | .842 |
| PsyCap10 | 17.24 | 7.148 | .592 | .410 | .852 |
| PsyCap11 | 17.05 | 6.984 | .764 | .593 | .820 |
| PsyCap12 | 17.21 | 7.286 | .606 | .373 | .848 |

Inter-item Correlation Matrix

| | PsyCap7 | PsyCap8 | PsyCap9 | PsyCap10 | PsyCap11 | PsyCap12 |
|----------|---------|---------|---------|----------|----------|----------|
| PsyCap7 | 1.000 | .589 | .521 | .374 | .593 | .456 |
| PsyCap8 | .589 | 1.000 | .539 | .448 | .631 | .512 |
| PsyCap9 | .521 | .539 | 1.000 | .470 | .562 | .429 |
| PsyCap10 | .374 | .448 | .470 | 1.000 | .599 | .467 |
| PsyCap11 | .593 | .631 | .562 | .599 | 1.000 | .530 |
| PsyCap12 | .456 | .512 | .429 | .467 | .530 | 1.000 |

Resilience Subscale

An internal consistency coefficient of $\alpha = .708$ which is a bit lower than the critical threshold value of .80 (Nunnally, 1967) but higher than the .70 threshold was reported. All the items with the exception of the PsyCap13R indicated that the corrected item-total correlated with the total score (Pallant, 2016). PsyCap13R is a reverse-scored item. Some authors have touted reverse-scored items as sometimes problematic (Du Plessis, 2014; Marsh, 1996; Schmitt & Stults, 1985; Woods, 2006). The corrected-item-total statistics of PsyCap13R considerably missed the .30 cutoff level (Pallant, 2016). The item-total statistics indicated that the Cronbach alpha would significantly increase to $\alpha = .790$ if item PsyCap13R is deleted. Item PsyCap13R was therefore deleted. The output is shown in Table 4.7.

TABLE 4.7

The Reliability Analysis Output for the Resilience Subscale

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|--|-----------------|
| .708 | .731 | 6 |

Item-total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|-----------|----------------------------------|-----------------------------------|--|------------------------------------|--|
| PsyCap14 | 16.6132 | 7.006 | .580 | .348 | .625 |
| PsyCap15 | 16.6604 | 7.240 | .452 | .364 | .665 |
| PsyCap16 | 16.7736 | 7.285 | .525 | .376 | .644 |
| PsyCap17 | 16.5802 | 6.813 | .619 | .442 | .612 |
| PsyCap18 | 16.6038 | 7.634 | .510 | .350 | .653 |
| PsyCap13R | 16.3443 | 8.549 | .095 | .069 | .790 |

Inter-item Correlation Matrix

| | PsyCap14 | PsyCap15 | PsyCap16 | PsyCap17 | PsyCap18 | PsyCap13R |
|-----------|----------|----------|----------|----------|----------|-----------|
| PsyCap14 | 1.000 | .429 | .419 | .472 | .424 | .157 |
| PsyCap15 | .429 | 1.000 | .530 | .377 | .330 | -.076 |
| PsyCap16 | .419 | .530 | 1.000 | .465 | .310 | .030 |
| PsyCap17 | .472 | .377 | .465 | 1.000 | .557 | .161 |
| PsyCap18 | .424 | .330 | .310 | .557 | 1.000 | .090 |
| PsyCap13R | .157 | -.076 | .030 | .161 | .090 | 1.000 |

Optimism

The Optimism subscale reported a Cronbach Alpha of .625 which falls below the critical cutoff value of .70 (Nunnally, 1967; Pallant, 2016). This alpha score raises a pertinent question of the suitability of the usage of this subscale for this study. The corrected item-total correlation also indicated that not all the items correlated above the satisfactory value of .30 with the total score (Pallant, 2016). Two items, PsyCap20R and PsyCap23R were flagged as problematic items with figures far less than 0.30. PsyCap20R and PsyCap23R are reverse-scored items. If these two items are deleted, the Cronbach Alpha would increase to $\alpha = .673$. Consequently, item PsyCap20R and PsyCap23R were deleted.

TABLE 4.8*The Reliability Analysis Output for the Optimism Subscale***Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|--|-----------------|
| .625 | .655 | 6 |

Item-total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|-----------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| PsyCap19 | 16.9057 | 6.001 | .526 | .477 | .522 |
| PsyCap21 | 16.8066 | 5.910 | .474 | .492 | .535 |
| PsyCap22 | 16.8491 | 5.844 | .517 | .404 | .519 |
| PsyCap24 | 16.8962 | 6.274 | .430 | .299 | .556 |
| PsyCap20R | 16.9481 | 6.874 | .158 | .184 | .660 |
| PsyCap23R | 16.8915 | 6.562 | .161 | .175 | .673 |

UNIVERSITY of the
Inter-item Correlation Matrix
 WESTERN CAPE

| | PsyCap19 | PsyCap21 | PsyCap22 | PsyCap24 | PsyCap20R | PsyCap23R |
|-----------|----------|----------|----------|----------|-----------|-----------|
| PsyCap19 | 1.000 | .626 | .551 | .463 | -.033 | .063 |
| PsyCap21 | .626 | 1.000 | .571 | .463 | -.061 | -.020 |
| PsyCap22 | .551 | .571 | 1.000 | .410 | .035 | .074 |
| PsyCap24 | .463 | .463 | .410 | 1.000 | .097 | -.022 |
| PsyCap20R | -.033 | -.061 | .035 | .097 | 1.000 | .392 |
| PsyCap23R | .063 | -.020 | .074 | -.022 | .392 | 1.000 |

4.3.1.3 Reliability analysis of the Psychological Climate (PCQ)

The Psychological Climate (PsyClim) by Brown and Leigh (1996) is a self-report measure that contains 21 items categorised into 6 subscales. The reliability analysis was

separately conducted for each of the 6 subscales. This scale consists of 21 items that was developed on 6 factors namely, supportive management, role clarity, contribution, recognition, self-expression, and challenge.

Supportive Management

The *Supportive Management subscale* reported an internal consistency coefficient of $\alpha = .792$. This score as stated by Nunnally (1967) is above the cutoff value of .70. All the corrected item-total correlations with the exception of item PsyClim4 were larger than .30 which is an acceptable score (Pallant, 2016). PsyClim4 was marginally lower than the acceptable value of .30. The item-total statistics indicated that the Cronbach alpha would increase to $\alpha = .836$ if item PsyClim4 is deleted. However, Item PsyClim4 was retained so that the psychological properties of the subscale can be retained and also because the Cronbach alpha had already attained the 0.70 threshold point. This is presented in Table 4.9.



TABLE 4.9

The Reliability Analysis Output for the Supportive Management Subscale

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|--|-----------------|
| .792 | .793 | 5 |

Item-total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---------|----------------------------------|-----------------------------------|--|------------------------------------|--|
| PsyCli1 | 13.16 | 29.488 | .598 | .428 | .744 |
| PsyCli2 | 13.34 | 28.642 | .687 | .541 | .716 |
| PsyCli3 | 12.94 | 27.845 | .672 | .504 | .719 |
| PsyCli4 | 12.90 | 34.871 | .297 | .096 | .836 |
| PsyCli5 | 12.95 | 28.997 | .635 | .512 | .732 |

Inter-item Correlation Matrix

| | PsyCli1 | PsyCli2 | PsyCli3 | PsyCli4 | PsyCli5 |
|---------|---------|---------|---------|---------|---------|
| PsyCli1 | 1.000 | .620 | .499 | .267 | .418 |
| PsyCli2 | .620 | 1.000 | .565 | .226 | .609 |
| PsyCli3 | .499 | .565 | 1.000 | .265 | .653 |
| PsyCli4 | .267 | .226 | .265 | 1.000 | .212 |
| PsyCli5 | .418 | .609 | .653 | .212 | 1.000 |

UNIVERSITY of the
WESTERN CAPE

Role Clarity

The *Role Clarity subscale* reported a very high internal consistency coefficient of $\alpha = .914$. The corrected item-total correlation signified that all the items correlated with the total score (Pallant, 2016). Apparently, the deletion of any of the items would further decrease the alpha value since none of the items were identified as problematic. This is depicted in Table 4.10.

TABLE 4.10*The Reliability Analysis Output for the Role Clarity Subscale***Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|--|-----------------|
| .914 | .914 | 3 |

Item-total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| PsyCli6 | 5.19 | 9.670 | .807 | .654 | .892 |
| PsyCli7 | 5.11 | 9.291 | .825 | .689 | .877 |
| PsyCli8 | 5.25 | 9.572 | .849 | .721 | .859 |

Inter-item Correlation Matrix

| | PsyCli6 | PsyCli7 | PsyCli8 |
|---------|---------|---------|---------|
| PsyCli6 | 1.000 | .752 | .782 |
| PsyCli7 | .752 | 1.000 | .806 |
| PsyCli8 | .782 | .806 | 1.000 |

Contribution Subscale

The *Contribution* subscale reported a strong internal consistency coefficient of $\alpha = .950$ which is considered an excellent value for this study (Nunnally, 1967; Pallant, 2016). The scores of the corrected item-total correlation denoted that all the items correlated far above the specified value of .30 and thus a part of the same construct (Pallant, 2016), as such all the items were good. This is depicted in Table 4.11.

TABLE 4.11

The Reliability Analysis Output for the Contribution Subscale

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|--|-----------------|
| .950 | .950 | 4 |

Item-total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|----------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| PsyCli9 | 7.46 | 23.700 | .903 | .832 | .926 |
| PsyCli10 | 7.49 | 23.407 | .913 | .846 | .923 |
| PsyCli11 | 7.21 | 24.500 | .842 | .711 | .945 |
| PsyCli12 | 7.43 | 23.925 | .856 | .736 | .941 |

Inter-item Correlation Matrix

| | PsyCli9 | PsyCli10 | PsyCli11 | PsyCli12 |
|----------|---------|----------|----------|----------|
| PsyCli9 | 1.000 | .897 | .808 | .824 |
| PsyCli10 | .897 | 1.000 | .820 | .834 |
| PsyCli11 | .808 | .820 | 1.000 | .769 |
| PsyCli12 | .824 | .834 | .769 | 1.000 |

Recognition Subscale

The Cronbach alpha of .798 for the Recognition subscale is satisfactory. Although the corrected item-total correlation signified that the items all correlated above .30 with the total score (Pallant, 2016), it is observed that the deletion of PsyCli13 would result in a significant increase of the alpha from .798 to .868. However, since the reported alpha

score is above the critical cutoff value of .70, and due to the limited number items in the scale, Item PsyCli13 will be retained. This is depicted in Table 4.12.

TABLE 4.12

The Reliability Analysis Output for the Recognition Subscale

| Reliability Statistics | | | | | |
|-------------------------------|---|-----------------|--|--|--|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items | | | |
| .798 | .807 | 4 | | | |

| Item-total Statistics | | | | | |
|------------------------------|-------------------------------|-----------------------------------|--|------------------------------------|--|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
| PsyCli13 | 5.77 | 10.053 | .522 | .305 | .868 |
| PsyCli14 | 6.24 | 9.255 | .768 | .651 | .591 |
| PsyCli15 | 6.36 | 10.621 | .665 | .589 | .708 |

| Inter-item Correlation Matrix | | | |
|--------------------------------------|----------|----------|----------|
| | PsyCli13 | PsyCli14 | PsyCli15 |
| PsyCli13 | 1.000 | .552 | .552 |
| PsyCli14 | .552 | 1.000 | 1.000 |
| PsyCli15 | .426 | .768 | .768 |

Self-Expression Subscale

A satisfactorily significant Cronbach alpha of .806 was obtained the Self Expression Subscale. All values in the corrected item-total correlation correlated above .30. It is noted that there would be a significant rise in the alpha value from 0.806 to 0.916 if PsyClim18 is removed from further analysis. Item PsyClim18 was retained because the alpha score had already exceeded the .70 threshold and because of the limited number of items on the subscale. The output is shown in Table 4.13.

TABLE 4.13

The Reliability Analysis Output for the Self-expression Subscale

| Reliability Statistics | | | | | |
|-------------------------------|--|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items | | | |
| .806 | .822 | 4 | | | |
| Item-total Statistics | | | | | |
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
| PsyCli16 | 9.48 | 19.246 | .795 | .789 | .677 |
| PsyCli17 | 9.42 | 19.154 | .814 | .766 | .669 |
| PsyCli18 | 8.52 | 23.824 | .302 | .131 | .916 |
| PsyCli19 | 9.04 | 19.373 | .679 | .618 | .728 |

Inter-item Correlation Matrix

| | PsyCli16 | PsyCli17 | PsyCli18 | PsyCli19 |
|----------|----------|----------|----------|----------|
| PsyCli16 | 1.000 | .862 | .282 | .776 |
| PsyCli17 | .862 | 1.000 | .355 | .730 |
| PsyCli18 | .282 | .355 | 1.000 | .210 |
| PsyCli19 | .776 | .730 | .210 | 1.000 |

Challenge Subscale

The *Challenge subscale* has an adequate Cronbach alpha of .785. The corrected item-total correlation values indicate that all the items correlated more than .30 with the total score. None of the items can be deleted because the subscale has only two items. This is portrayed in the zero value of the “alpha item if deleted.” This is depicted in Table 4.14.

TABLE 4.14

The Reliability Analysis Output for the Challenge Subscale

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|--|-----------------|
| .785 | .788 | 2 |

Item-total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|----------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| PsyCli20 | 3.07 | 3.365 | .650 | .422 | |
| PsyCli21 | 2.54 | 2.761 | .650 | .422 | |

Inter-item Correlation Matrix

| | PsyCli16 | PsyCli17 |
|----------|----------|----------|
| PsyCli20 | 1.000 | .650 |
| PsyCli21 | .650 | 1.000 |

4.3.1.4 Reliability analysis of the Turnover Intention (TI)

Turnover Intention Scale by Samuel (2017) is a self-report questionnaire of only one scale with six items. The reliability analysis was for the scale.

Turnover Intention Scale

A reliability coefficient of $\alpha = .862$ was obtained for the *Turnover Intention scale*. This score is considered adequate for this study (Nunnally, 1967; Pallant, 2016). All the corrected item-total correlations evidently displayed higher than .30 which is acceptable (Pallant, 2016). None of the items in the item-total statistics indicated a significant change in the Cronbach alpha value should any of the items be deleted. All the items were therefore retained. The output is shown in Table 4.15.

TABLE 4.15

The Reliability Analysis Output for the Turnover Intention Scale

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|--|-----------------|
| .862 | .862 | 6 |

Item-total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|-----|----------------------------------|--------------------------------------|--|------------------------------------|--|
| TI1 | 19.39 | 44.855 | .691 | .567 | .833 |
| TI2 | 18.72 | 47.427 | .656 | .508 | .839 |
| TI3 | 19.42 | 45.610 | .706 | .536 | .830 |
| TI4 | 19.41 | 44.338 | .700 | .538 | .831 |
| TI5 | 19.57 | 45.906 | .659 | .451 | .838 |
| TI6 | 19.70 | 49.340 | .522 | .286 | .862 |

Inter-item Correlation Matrix

| | TI1 | TI2 | TI3 | TI4 | TI5 | TI6 |
|-----|-------|-------|-------|-------|-------|-------|
| TI1 | 1.000 | .675 | .593 | .490 | .548 | .378 |
| TI2 | .675 | 1.000 | .517 | .521 | .459 | .379 |
| TI3 | .593 | .517 | 1.000 | .655 | .529 | .422 |
| TI4 | .490 | .521 | .655 | 1.000 | .575 | .465 |
| TI5 | .548 | .459 | .529 | .575 | 1.000 | .451 |
| TI6 | .378 | .379 | .422 | .465 | .451 | 1.000 |

4.3.1.5 Reliability analysis of the Work Engagement Scale (UWES)

The 17-item Utrecht Work Engagement Scale (UWES) by Schaufeli, Salanova, Gonzales-Roma and Bakker (2002) is a self-report measure categorised into 3 subscales. The reliability analysis was separately conducted for each of the 3 subscales, namely Vigour, Dedication and Absorption.

Vigour

The *Vigour subscale* reported a satisfactory internal consistency coefficient of $\alpha = .823$ (Nunnally, 1967). All the corrected item-total correlations were larger than .30 which is an acceptable score (Pallant, 2016). None of the items indicated an appreciable increase

in the alpha value if dropped. Therefore all the items were retained. This output is presented in Table 4.16.

TABLE 4.16

The Reliability Analysis Output for the Vigour Subscale

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|--|-----------------|
| .823 | .827 | 6 |

Item-total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| UWES1 | 21.34 | 44.036 | .515 | .359 | .810 |
| UWES4 | 20.86 | 42.596 | .704 | .551 | .775 |
| UWES8 | 21.40 | 40.289 | .637 | .490 | .784 |
| UWES12 | 21.44 | 39.319 | .694 | .517 | .771 |
| UWES15 | 21.61 | 44.238 | .446 | .234 | .827 |
| UWES17 | 20.89 | 43.728 | .576 | .408 | .798 |

Inter-item Correlation Matrix

| | UWES1 | UWES4 | UWES8 | UWES12 | UWES15 | UWES17 |
|--------|-------|-------|-------|--------|--------|--------|
| UWES1 | 1.000 | .571 | .417 | .452 | .242 | .289 |
| UWES4 | .571 | 1.000 | .607 | .546 | .333 | .505 |
| UWES8 | .417 | .607 | 1.000 | .616 | .332 | .383 |
| UWES12 | .452 | .546 | .616 | 1.000 | .374 | .536 |
| UWES15 | .242 | .333 | .332 | .374 | 1.000 | .440 |
| UWES17 | .289 | .505 | .383 | .536 | .440 | 1.000 |

Absorption Subscale

A reliability coefficient of $\alpha = .835$ was obtained for the Absorption subscale. This score is considered satisfactory for this study (Nunnally, 1967). All the corrected item-total correlations evidently displayed higher than .30 which is acceptable (Pallant, 2016). None of the items in the item-total statistics indicated a significant change in the Cronbach alpha value should any of the items be deleted. All the items were therefore retained. The output is shown in Table 4.17.

TABLE 4.17

The Reliability Analysis Output for the Absorption Subscale

| Reliability Statistics | | | | | |
|-------------------------------|------------------|--|-----------------|--|--|
| | Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items | | |
| | .835 | .843 | 6 | | |

| <i>Item-total Statistics</i> | | | | | |
|------------------------------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
| UWES3 | 20.24 | 44.191 | .613 | .431 | .809 |
| UWES6 | 20.78 | 40.856 | .680 | .505 | .794 |
| UWES9 | 20.51 | 42.621 | .664 | .535 | .799 |
| UWES11 | 20.43 | 42.104 | .703 | .573 | .792 |
| UWES14 | 21.46 | 44.022 | .437 | .239 | .846 |
| UWES16 | 21.30 | 38.970 | .618 | .409 | .809 |

Inter-item Correlation Matrix

| | UWES3 | UWES6 | UWES9 | UWES11 | UWES14 | UWES16 |
|--------|-------|-------|-------|--------|--------|--------|
| UWES3 | 1.000 | .591 | .540 | .530 | .318 | .385 |
| UWES6 | .591 | 1.000 | .563 | .605 | .330 | .494 |
| UWES9 | .540 | .563 | 1.000 | .689 | .279 | .468 |
| UWES11 | .530 | .605 | .689 | 1.000 | .306 | .523 |
| UWES14 | .318 | .330 | .279 | .306 | 1.000 | .462 |
| UWES16 | .385 | .494 | .468 | .523 | .462 | 1.000 |

Dedication Subscale

A satisfactory reliability coefficient value of $\alpha = .818$ was obtained for the Dedication subscale (Nunnally, 1967). Acceptable corrected item-total correlation values were also reported to be larger than .30 (Pallant, 2016). Item13 was flagged as problematic with the item-total statistics indicating that the Cronbach alpha would increase to .859 if item UWES13 is deleted. However, Item UWES13 was retained as the cut-off level of .70 had been reached. The resulting output is shown in Table 4.18.

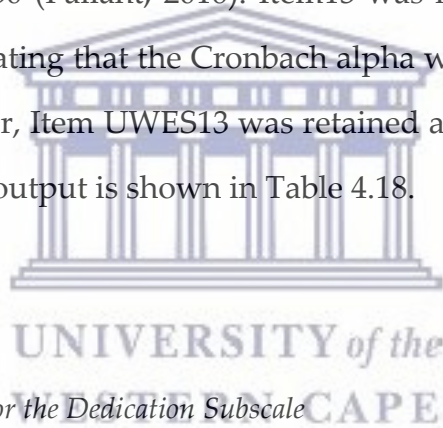


TABLE 4.18

The Reliability Analysis Output for the Dedication Subscale

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Number of Items |
|------------------|--|-----------------|
| .818 | .821 | 5 |

Item-total Statistics

| | Scale Mean if Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--------|-----------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| UWES2 | 18.09 | 26.560 | .680 | .533 | .763 |
| UWES5 | 18.25 | 26.072 | .698 | .512 | .757 |
| UWES7 | 18.41 | 25.029 | .654 | .516 | .769 |
| UWES10 | 18.18 | 25.127 | .714 | .588 | .751 |
| UWES13 | 18.33 | 30.518 | .342 | .138 | .859 |

Inter-item Correlation Matrix

| | UWES2 | UWES5 | UWES7 | UWES10 | UWES13 |
|--------|-------|-------|-------|--------|--------|
| UWES2 | 1.000 | .638 | .523 | .652 | .279 |
| UWES5 | .638 | 1.000 | .573 | .563 | .361 |
| UWES7 | .523 | .573 | 1.000 | .681 | .244 |
| UWES10 | .652 | .563 | .681 | 1.000 | .271 |
| UWES13 | .279 | .361 | .244 | .271 | 1.000 |

4.4 EXPLORATORY FACTOR ANALYSIS (DIMENSIONALITY ANALYSIS)

The sole aim of the factor analyses conducted in this study was to verify the uni-dimensional nature of each of the subscales and to exclude items that do not sufficiently load onto the latent variable under investigation. To determine the number of factors to be extracted or retained, the rule of eigenvalue must be greater than 1 was used. The items deleted during the item analyses were not included in the subsequent analyses. The IBM SPSS Statistics version 24 was utilized for factor analyses.

This section therefore presents the Exploratory Factor Analysis and results of the instruments utilized in this study. In this section, the Correlation Matrix, the Kaiser-Meyer-Olkin (KMO), Bartlett's Test of Sphericity, Total Variance Explained, Scree Plot and the Rotated Component Matrix will be reported on.

4.4.1 Dimensional Analysis of the Authentic Leadership Inventory (ALI)

The four dimensions of the ALI proved to be uni-dimensional in nature. The correlation matrix of the four subscales - Self Awareness, Relational Transparency, Internalized Moral Perspective and Balanced Processing all proved factor analyzable. The KMO and the Bartlett's test were used to determine the factorability of the scales. To verify the suitability of a data for factor analysis, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) value should be .50 or above and the value for the Bartlett's Test of Sphericity must be significant such that the value is 0.05 or less. Kaiser as cited in Field (2009) proposes that KMO index $< .50$ = unacceptable, values between $.50 - .70$ = Mediocre, values between $.70 - .80$ = good, values between $.80 - .90$ = Great whilst values $> .90$ = Superb. The KMO values ranged between .60 and .80. The KMO values were therefore satisfactory and the value for the Bartlett's Test of Sphericity was also significant. The determinant values were more than 0.00001 which depicts the factorizability of the scales



4.4.1.1 *Self-Awareness subscale*

The Self-Awareness subscale obtained a Kaiser-Meyer-Olkin measure of sampling adequacy value of .748 and the Bartlett's Test of Sphericity test statistic value was 150.176 (df = 6; p = 0.00). This indicates that the KMO is satisfactory and the Bartlett's Test of Sphericity is significant. The identity matrix null hypothesis was thus rejected and the correlation matrix was categorized as suitable for factor analysis (Kaiser (as cited in Field, 2009)). All the items of the subscale were included in the dimensionality analysis as none of the items proved problematic as was already portrayed in the item analysis. The correlation matrix exhibited a significant mix (p < .05) as all correlations were more than .30. Only one factor was extracted as it obtained an eigen value greater

than 1, reflecting 54.1% of the variance. The one factor extraction stance is unequivocally confirmed by the Scree plot. The uni-dimensionality assumption of the subscale is confirmed. The resultant factor structure is shown in Table 4.19.

TABLE 4.19

Factor Matrix for the Self-awareness Subscale

| | Factor 1 |
|--------|-------------|
| Auth1 | .589 |
| Auth5 | .552 |
| Auth9 | .688 |
| Auth13 | .662 |

KMO and Bartlett's Test

| | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .748 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 150.156 |
| | df | 6 |
| | Sig. | .000 |

Total Variance Explained

| Factor | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|--------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.163 | 54.078 | 54.078 | 1.562 | 39.062 | 39.062 |
| 2 | .681 | 17.018 | 71.096 | | | |
| 3 | .636 | 15.891 | 86.988 | | | |
| 4 | .520 | 13.012 | 100.000 | | | |

4.4.1.2 Relational Transparency subscale

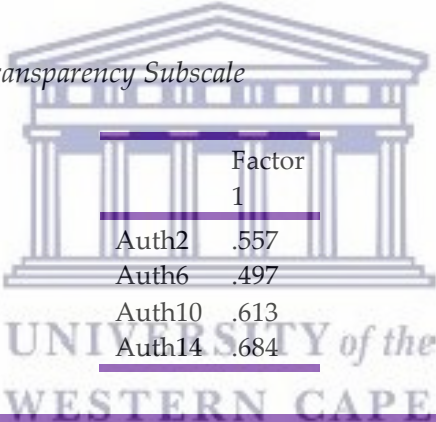
Exploratory factor analysis discloses that the *Relational Transparency subscale* as indicated by the KMO index and the Bartlett's test of sphericity values of .704 and 126.540 ($df = 6$; $p=0.000$) respectively is factor analyzable (Kaiser (as cited in Field, 2009). In essence, the identity matrix null hypothesis was rejected and the correlation matrix

termed factor analyzable (Kaiser (as cited in Field, 2009). The uni-dimensionality of the *Relational Transparency subscale* was therefore verified.

One factor was extracted with an eigenvalue greater than 1 and this factor accounted for 50.9% of the variance. The Scree plot confirmed an eigenvalue of one. The factor matrix items loaded on one factor suitably and factor loadings were more than .50 with the exception of item Auth6 which was marginally below the .50 level. The resultant factor structure shown in Table 4.20 signifies that the solution could not be rotated but that 8 iterations were required.

TABLE 4.20

Factor Matrix for the Relational Transparency Subscale



| | Factor 1 |
|--------|-------------|
| Auth2 | .557 |
| Auth6 | .497 |
| Auth10 | .613 |
| Auth14 | .684 |

| KMO and Bartlett's Test | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .704 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 126.540 |
| | df | 6 |
| | Sig. | .000 |

| Total Variance Explained | | | | | | |
|--------------------------|-------|---------------------|--------------|-------------------------------------|---------------|--------------|
| Factor | Total | Initial Eigenvalues | | Extraction Sums of Squared Loadings | | |
| | | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.036 | 50.898 | 50.898 | 1.400 | 35.000 | 35.000 |
| 2 | .808 | 20.208 | 71.105 | | | |
| 3 | .627 | 15.682 | 86.787 | | | |
| 4 | .529 | 13.213 | 100.000 | | | |

4.4.1.3 Internalized Moral Perspective subscale

A Kaiser-Meyer-Olkin measure of sampling adequacy value of .643 and the Bartlett's Test of Sphericity test statistic value of 78.501 (df = 6; p = 0.00) was obtained for the Internalized Moral Perspective subscale. This indicated that the KMO was sufficient and the Bartlett's Test of Sphericity is significant. In essence, the identity matrix null hypothesis was rejected and the correlation matrix termed factor analyzable (Kaiser (as cited in Field, 2009)).

Only one factor was extracted because it had an eigenvalue greater than 1. The scree plot also indicated that a single factor should be extracted. All the factor matrix items loaded suitably on one factor and the factor loadings were more than .50 with the exception of item Auth3 and Auth7 which were below .50 but still above the .30 acceptable cut-off. None of the factor loadings really had an impressive score which implied that all the items possibly reflected less than 44.4% of the variance in the common underlying factor. This result corresponds with the findings from the item analysis. The uni-dimensionality assumption was thus corroborated. The resultant factor structure is portrayed in Table 4.21 which signifies that the solution could not be rotated and that 10 iterations was required.

TABLE 4.21

Factor Matrix for the Internalized Moral Perspective Subscale

| | Factor 1 |
|--------|-------------|
| Auth3 | .498 |
| Auth7 | .341 |
| Auth11 | .555 |
| Auth15 | .637 |

KMO and Bartlett's Test

| | | |
|---|--------------------|--------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .643 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 78.501 |
| | df | 6 |
| | Sig. | .000 |

Total Variance Explained

| Factor | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|--------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 1.776 | 44.391 | 44.391 | 1.078 | 26.944 | 26.944 |
| 2 | .937 | 23.416 | 67.807 | | | |
| 3 | .685 | 17.121 | 84.928 | | | |
| 4 | .603 | 15.072 | 100.000 | | | |

4.4.1.4 *Balanced Processing subscale*

The Exploratory factor analysis portrayed that the *Balanced Processing subscale* is factor analyzable as indicated by the Kaiser-Meyer-Olkin index of .740 and the Bartlett's Test of Sphericity values of 185.380 (df = 6; p = 0.00). The KMO was therefore considered adequate and the Bartlett's Test of Sphericity significant. The *Balanced Processing subscale* was observed to be uni-dimensional in nature with only one extracted factor with an eigenvalue larger than 1. The resultant item accounted for 56.98% of the variance. All the factor loadings exceeded the .50 level and 30% of the residual

correlations were larger than .05 suggesting that the factor solution provided a valid explanation of the observed inter-item correlation matrix. In essence, the identity matrix null hypothesis was rejected and the correlation matrix termed factor analyzable. Table 4.22 signifies that the solution could not be rotated but that 7 iterations were required.

TABLE 4.22

Factor Matrix for the Balanced Processing Subscale

| | | Factor 1 | | | | |
|---|-------|---------------------|--------------|-------------------------------------|---------------|--------------|
| | | Auth3 | .580 | | | |
| | | Auth7 | .648 | | | |
| | | Auth11 | .710 | | | |
| | | Auth15 | .673 | | | |
| KMO and Bartlett's Test | | | | | | |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | | | .740 | | |
| Bartlett's Test of Sphericity | | Approx. Chi-Square | | 185.380 | | |
| | | df | | 6 | | |
| | | Sig. | | .000 | | |
| Total Variance Explained | | | | | | |
| Factor | Total | Initial Eigenvalues | | Extraction Sums of Squared Loadings | | |
| | | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.279 | 56.982 | 56.982 | 1.714 | 42.859 | 42.859 |
| 2 | .661 | 16.531 | 73.513 | | | |
| 3 | .616 | 15.411 | 88.924 | | | |
| 4 | .443 | 11.076 | 100.000 | | | |

4.4.2 Dimensional Analysis of the Psychological Capital Questionnaire (PsyCap)

The four dimensions of the PsyCap scales - Self-Efficacy, Hope, Resilience, and Optimism, all proved uni-dimensional in nature. The KMO values ranged high from $> .70$ to $> .80$. Kaiser (as cited in Field, 2005) proposes that KMO index $< .50$ = unacceptable, values between $.50 - .70$ = Mediocre, values between $.70 - .80$ = good, values between $.80 - .90$ = Great whilst values $> .90$ = Superb. The KMO values were therefore satisfactory and the value for the Bartlett's Test of Sphericity was also significant.

4.4.2.1 Self-Efficacy subscale

The Self-Efficacy subscale obtained a Kaiser-Meyer-Olkin measure of sampling adequacy value of $.836$ and the Bartlett's Test of Sphericity test statistic value was 475.337 ($df = 15$; $p = 0.00$). According to Kaiser (1974), this indicates that the KMO index is satisfactory, the Bartlett's Test of Sphericity is significant and therefore the correlation matrix is factor analyzable. The uni-dimensionality of the Self-Efficacy subscale was observed and all the items of the subscale were included in the dimensionality analysis as none of the items proved problematic. 56.27% of the variance was accounted for by one factor which had an eigenvalue of more than 1. The Scree plot unequivocally confirms the one factor extraction stance. The factor loadings were all above $.50$ suggesting that the factor solution provided a valid explanation of the observed inter-item correlation matrix.

TABLE 4.23*Factor Matrix for the Self-efficacy Subscale*

| | Factor 1 |
|---------|-------------|
| PsyCap1 | .575 |
| PsyCap2 | .727 |
| PsyCap3 | .753 |
| PsyCap4 | .794 |
| PsyCap5 | .586 |
| PsyCap6 | .691 |

KMO and Bartlett's Test

| | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .836 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 475.337 |
| | df | 15 |
| | Sig. | .000 |

Total Variance Explained

| Factor | Total | Initial Eigenvalues | | Extraction Sums of Squared Loadings | | |
|--------|-------|---------------------|--------------|-------------------------------------|---------------|--------------|
| | | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.376 | 56.271 | 56.271 | 2.877 | 47.956 | 47.956 |
| 2 | .823 | 13.709 | 69.980 | | | |
| 3 | .597 | 9.945 | 79.725 | | | |
| 4 | .489 | 8.148 | 88.072 | | | |
| 5 | .405 | 6.747 | 94.820 | | | |
| 6 | .311 | 5.180 | 100.000 | | | |

4.4.2.2 Hope subscale

Exploratory factor analysis reveals that the *Hope subscale* as indicated by the KMO index and the Bartlett's test of sphericity values of .878 and 527.383 ($df = 15$; $p=0.000$) respectively is factor analyzable (Field, 2009; Kaiser, 1974). Essentially, the identity matrix null hypothesis was rejected. The uni-dimensionality of the *Hope subscale* was therefore verified.

One factor was extracted with an eigenvalue greater than 1 and this factor accounted for 59.75% of the variance. The Scree plot confirmed the extracted eigenvalue. The factor matrix items loaded suitably on one factor, factor loadings were more than 0.50 and the extracted communality values exceeded 0.30. Furthermore only 10% of the residual correlations were larger than .05 suggesting that the factor solution provides a credible explanation for the observed inter-item correlation matrix. The resultant factor structure is portrayed in Table 4.24.

TABLE 4.24

Factor Matrix for the Hope Subscale

| | Factor 1 |
|----------|-------------|
| PsyCap7 | .706 |
| PsyCap8 | .768 |
| PsyCap9 | .697 |
| PsyCap10 | .645 |
| PsyCap11 | .839 |
| PsyCap12 | .653 |

| KMO and Bartlett's Test | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .878 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 527.383 |
| | df | 15 |
| | Sig. | .000 |

| Total Variance Explained | | | | | | |
|--------------------------|-------|---------------------|--------------|-------------------------------------|---------------|--------------|
| Factor | Total | Initial Eigenvalues | | Extraction Sums of Squared Loadings | | |
| | | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.585 | 59.749 | 59.749 | 3.121 | 52.012 | 52.012 |
| 2 | .667 | 11.112 | 70.861 | | | |
| 3 | .570 | 9.493 | 80.354 | | | |
| 4 | .466 | 7.760 | 88.114 | | | |
| 5 | .400 | 6.671 | 94.785 | | | |
| 6 | .313 | 5.215 | 100.000 | | | |

4.4.2.3 Resilience subscale

A Kaiser-Meyer-Olkin measure of sampling adequacy value of .781 and the Bartlett's Test of Sphericity test statistic value of 293.343 (df = 10; p = 0.000) was obtained for the Resilience subscale. Kaiser (1974) confirmed that the KMO was sufficient and that the Bartlett's Test of Sphericity is significant. The identity matrix null hypothesis was therefore rejected and the correlation matrix termed factor analyzable.

One factor was extracted and this factor explained for 54.56% of the variance. The scree plot indicated that a single factor should be extracted. The factor matrix indicated that all the items loaded on one factor satisfactorily as all factor loadings were larger than .60 and 16% of the residual correlations were larger than .05.

The uni-dimensionality assumption was substantiated. The resultant factor structure shown in Table 4.25 signifies that the solution could not be rotated but that 10 iterations was required.

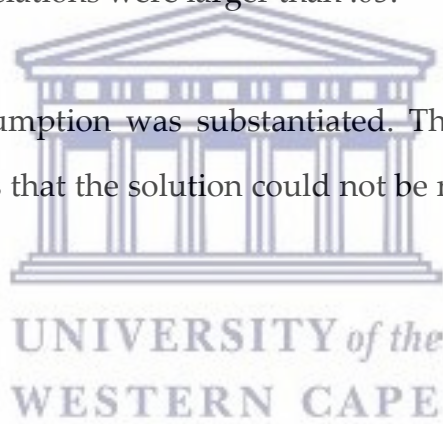


TABLE 4.25:

Factor Matrix for the Resilience Subscale

| | Factor 1 |
|----------|-------------|
| PsyCap14 | .664 |
| PsyCap15 | .624 |
| PsyCap16 | .655 |
| PsyCap17 | .730 |
| PsyCap18 | .612 |

KMO and Bartlett's Test

| | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .781 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 293.343 |
| | df | 10 |
| | Sig. | .000 |

Total Variance Explained

| Factor | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|--------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.728 | 54.564 | 54.564 | 2.167 | 43.344 | 43.344 |
| 2 | .818 | 16.360 | 70.924 | | | |
| 3 | .563 | 11.259 | 82.183 | | | |
| 4 | .504 | 10.086 | 92.269 | | | |
| 5 | .387 | 7.731 | 100.000 | | | |

4.4.2.4 *Optimism subscale*

Exploratory factor analysis showed that the *Optimism subscale* is factor analyzable as specified by the Kaiser-Meyer-Olkin index and the Bartlett's Test of Sphericity values of .793 and 185.380 (df = 6; p = 0.00). These values indicated that the KMO was satisfactory and the Bartlett's Test of Sphericity is significant. The Optimism subscale was observed to be uni-dimensional in nature with only one extracted factor with an eigenvalue larger than 1. The resultant item accounted for 63.76% of the variance. The identity matrix null hypothesis was rejected and the correlation matrix termed factor analyzable. The resultant factor structure shown in Table 4.26 signifies that the solution could not be rotated but that 7 iterations were required.

TABLE 4.26*Factor Matrix for the Optimism Subscale*

| | Factor 1 |
|----------|-------------|
| PsyCap19 | .783 |
| PsyCap21 | .800 |
| PsyCap22 | .708 |
| PsyCap24 | .583 |

KMO and Bartlett's Test

| | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .793 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 273.947 |
| | df | 6 |
| | Sig. | .000 |

Total Variance Explained

| Factor | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|--------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.550 | 63.755 | 63.755 | 2.095 | 52.367 | 52.367 |
| 2 | .620 | 15.501 | 79.256 | | | |
| 3 | .457 | 11.432 | 90.688 | | | |
| 4 | .372 | 9.312 | 100.000 | | | |

4.4.3 Dimensional analysis of the Psychological Climate Questionnaire

All six Psychological Climate subscales proved to be uni-dimensional. The results confirmed that Supportive Management, Role Clarity, Contribution, Recognition, Self-Expression and Challenge were uni-dimensional in nature. All the KMO values ranged between .60 to .80 with the exception of the challenge subscale which had a .50 KMO value. Kaiser (as cited in Field, 2009) proposes that KMO index < .50 = unacceptable,

values between .50 – 0.70 = Mediocre, values between .70 – .80 = good, values between .80 – .90 = Great whilst values > .90 = Superb. The KMO values were therefore satisfactory.

4.4.3.1 Supportive Management

The KMO index and the Bartlett’s test of sphericity of the Supportive Management subscale was computed. The results generated values of .770 and 362.983 (df = 10; p = 0.000) respectively. The values portrayed that exploratory factor analysis (EFA) could be performed on the subscale.

The uni-dimensional nature of the Supportive Management subscale was identified and none of the items proved problematic with the exception of PsyClim4. The relatively factor loading observed in PsyClim4 depicts that the item could be deleted as the factor loading was quite low compared to the other factors. This is confirmed by the reliability analysis previously conducted. However, PsyClim4 was not excluded. 56.29% of the variance was accounted for by one factor which had an eigenvalue of more than 1. The Scree plot confirms the one factor extraction stance. Solution could not be rotated and 6 iterations were required. The resulting factor structure is shown in Table 4.27.

TABLE 4.27

Factor Matrix for the Supportive Management Subscale

| | Factor 1 |
|---------|-------------|
| PsyCli1 | .673 |
| PsyCli2 | .807 |
| PsyCli3 | .774 |
| PsyCli4 | .321 |
| PsyCli5 | .745 |

KMO and Bartlett's Test

| | | | |
|---|--------------------|---------|------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | | .770 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 362.983 | |
| | Df | | 10 |
| | Sig. | | .000 |

Total Variance Explained

| Factor | Total | Initial Eigenvalues | | Extraction Sums of Squared Loadings | | |
|--------|-------|---------------------|--------------|-------------------------------------|---------------|--------------|
| | | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.814 | 56.289 | 56.289 | 2.361 | 47.216 | 47.216 |
| 2 | .881 | 17.610 | 73.899 | | | |
| 3 | .624 | 12.473 | 86.373 | | | |
| 4 | .392 | 7.835 | 94.207 | | | |
| 5 | .290 | 5.793 | 100.000 | | | |

4.4.3.2 Role Clarity

The KMO index and the Bartlett's test of sphericity of the Role Clarity subscale generated values of .755 and 441.662 (df = 3; p=0.000) respectively. The values portrayed that the subscale is factor analyzable. Exploratory factor analysis with the high factor loadings proved the existence of a single factor in the Role Clarity subscale. The factor accounts for 85.36% of the variance and this supports the uni-dimensional nature of the subscale. The Scree plot also supports the extraction of the one factor. Table 4.28 portrays that all the items in the Role Clarity subscale have high significant factor loadings.

TABLE 4.28*Factor Matrix for the Role Clarity Subscale*

| | Factor 1 |
|---------|-------------|
| PsyCli6 | .855 |
| PsyCli7 | .881 |
| PsyCli8 | .915 |

KMO and Bartlett's Test

| | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .755 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 441.662 |
| | df | 3 |
| | Sig. | .000 |

Total Variance Explained

| Factor | Total | Initial Eigenvalues | | Extraction Sums of Squared Loadings | | |
|--------|-------|---------------------|--------------|-------------------------------------|---------------|--------------|
| | | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.561 | 85.356 | 85.356 | 2.343 | 78.112 | 78.112 |
| 2 | .251 | 8.362 | 93.719 | | | |
| 3 | .188 | 6.281 | 100.000 | | | |

UNIVERSITY of the
WESTERN CAPE

4.4.3.3 Contribution

The KMO index and the Bartlett's test of sphericity of the Contribution subscale generated values of .865 and 896.967 (df = 6; p = 0.000) respectively. The values portrayed that the subscale is factor analyzable. The factor analysis also verified the existence of a single factor in the subscale. The factor accounts for 86.94% of the variance and this supports the uni-dimensional nature of the subscale. The Scree plot also supports the one factor extraction stance. Table 4.29 portrays that all the items in the Role Clarity subscale have high significant factor loadings.

TABLE 4.29*Factor Matrix for the Contribution Subscale*

| | Factor 1 |
|----------|-------------|
| PsyCli9 | .938 |
| PsyCli10 | .950 |
| PsyCli11 | .866 |
| PsyCli12 | .881 |

KMO and Bartlett's Test

| | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .865 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 896.967 |
| | df | 6 |
| | Sig. | .000 |

Total Variance Explained

| Factor | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|--------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.478 | 86.938 | 86.938 | 3.308 | 82.707 | 82.707 |
| 2 | .233 | 5.827 | 92.765 | | | |
| 3 | .187 | 4.677 | 97.442 | | | |
| 4 | .102 | 2.558 | 100.000 | | | |

4.4.3.4 Recognition

The KMO index and the Bartlett's test of sphericity of the Recognition subscale generated values of .624 and 262.018 (df = 3; p=0.000) respectively. The factor loadings portrayed the existence of a single factor and that the subscale is factor analyzable. The factor accounts for 72.52% of the variance and this supports the uni-dimensional nature of the subscale. The Scree plot also supports the one factor extraction stance. However,

item PsyClim13 factor loading is relatively low. Table 4.30 portrays that all the items in the Recognition subscale depict high factor loadings but that 24 iterations were required.

TABLE 4.30

Factor Matrix for the Recognition Subscales

| | Factor 1 |
|-----------|-------------|
| PsyClim13 | .554 |
| PsyClim14 | .994 |
| PsyClim15 | .772 |

| KMO and Bartlett's Test | | | | | | | |
|---|-------|---------------------|--------------|-------------------------------------|---------------|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | | | | | .624 | |
| Bartlett's Test of Sphericity | | | | | | Approx. Chi-Square | 262.018 |
| | | | | | | df | 3 |
| | | | | | | Sig. | .000 |
| Total Variance Explained | | | | | | | |
| Factor | Total | Initial Eigenvalues | | Extraction Sums of Squared Loadings | | | |
| | | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | |
| 1 | 2.176 | 72.522 | 72.522 | 1.891 | 63.026 | 63.026 | |
| 2 | .609 | 20.284 | 92.806 | | | | |
| 3 | .216 | 7.194 | 100.000 | | | | |

4.4.3.5 Self-Expression

The KMO index and the Bartlett's test of sphericity of the Self-Expression subscale generated values of .745 and 512.986 (df = 6; p = 0.000) respectively. The values portrayed that the subscale is factor analyzable. The factor analysis also verified the

existence of a single factor in the subscale. The factor accounts for 67.99% of the variance and this supports the uni-dimensional nature of the subscale. The Scree plot supports the one factor extraction stance. Table 4.31 portrays that all the items in the Self-Expression subscale depict high factor loadings with the exception of item PsyCli18 which was lower than the other items but still within the acceptable range.

TABLE 4.31

Factor Matrix for the Self-expression Subscales

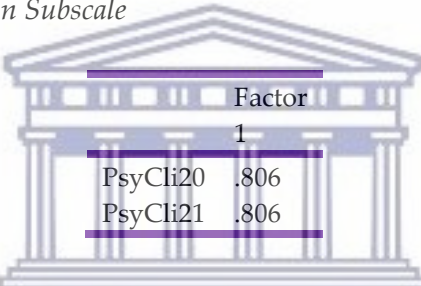
| | | Factor 1 | | | | |
|---|-------|---------------------|--------------|-------------------------------------|---------------|--------------|
| | | PsyCli16 | .944 | | | |
| | | PsyCli17 | .926 | | | |
| | | PsyCli18 | .320 | | | |
| | | PsyCli19 | .797 | | | |
| KMO and Bartlett's Test | | | | | | |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | | | .745 | | |
| Bartlett's Test of Sphericity | | | | Approx. Chi-Square | 512.986 | |
| | | | | df | 6 | |
| | | | | Sig. | .000 | |
| Total Variance Explained | | | | | | |
| | | Initial Eigenvalues | | Extraction Sums of Squared Loadings | | |
| Factor | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.720 | 67.992 | 67.992 | 2.487 | 62.168 | 62.168 |
| 2 | .874 | 21.845 | 89.837 | | | |
| 3 | .276 | 6.891 | 96.728 | | | |
| 4 | .131 | 3.272 | 100.000 | | | |

4.4.3.6 Challenge

The KMO index and the Bartlett's test of sphericity of the Challenge subscale generated values of .50 and 114.897 (df = 1; p = 0.000) respectively. The values portrayed that the subscale is factor analyzable. The factor analysis also verified the existence of a single factor in the subscale. The factor accounts for 82.49% of the variance and this supports the uni-dimensional nature of the subscale. The Scree plot also supports the one factor extraction stance. Table 4.32 portrays that all the items in the Self-Expression subscale depict high factor loadings.

TABLE 4.32

Factor Matrix for the Self-expression Subscale



| | Factor 1 |
|----------|-------------|
| PsyCli20 | .806 |
| PsyCli21 | .806 |

KMO and Bartlett's Test

| | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .500 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 114.897 |
| | df | 1 |
| | Sig. | .000 |

Total Variance Explained

| Factor | Total | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|--------|-------|---------------------|--------------|-------|-------------------------------------|--------------|--|
| | | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | |
| 1 | 1.650 | 82.486 | 82.486 | 1.298 | 64.884 | 64.884 | |
| 2 | .350 | 17.514 | 100.000 | | | | |

4.4.4 Dimensional Analysis of the Turnover Intention

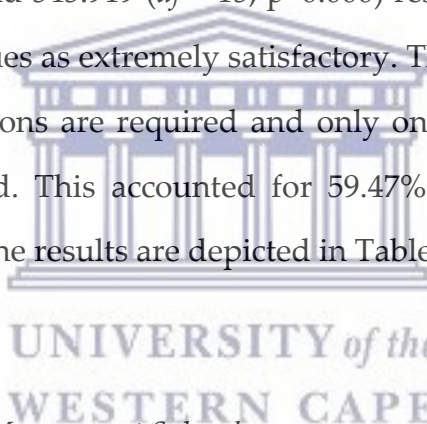
The results indicated a unidimensional factor structure of the Turnover Intention scale. The KMO value was $> .80$. Kaiser (1970) proposes that the KMO index $< .50$ = unacceptable, values between $.50 - 0.59$ = Miserable, values between $.60 - .69$ = Mediocre, values between $.70 - .79$ = Middling, values between $.80 - .89$ = Meritorious, whilst values $> .90$ = Marvelous. The KMO values were therefore satisfactory.

4.4.4.1 Turnover Intention

The exploratory factor analysis proves that the correlation matrix of the Turnover Intention scale is factor analyzable as denoted by the KMO index and the Bartlett's test of sphericity value of $.843$ and 545.919 ($df = 15$; $p=0.000$) respectively. Kaiser (as cited in Field, 2005), views these values as extremely satisfactory. The scale was also found to be uni-dimensional. Five iterations are required and only one factor with an eigen-value greater than 1 was obtained. This accounted for 59.47% of the variance. The factor loadings were all above $.5$. The results are depicted in Table 4.33.

TABLE 4.33

Factor Matrix for the Supportive Management Subscale



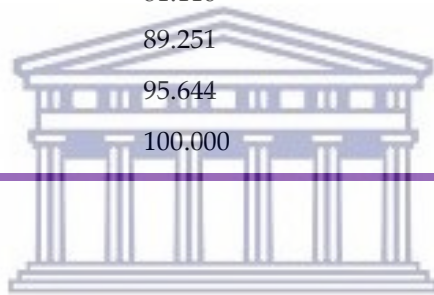
| | Factor 1 |
|------|-------------|
| Int1 | .762 |
| Int2 | .716 |
| Int3 | .774 |
| Int4 | .765 |
| Int5 | .713 |
| Int6 | .561 |

KMO and Bartlett's Test

| | | | |
|---|--------------------|--|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | | .843 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | | 545.919 |
| | df | | 15 |
| | Sig. | | .000 |

Total Variance Explained

| Factor | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|--------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.568 | 59.468 | 59.468 | 3.101 | 51.677 | 51.677 |
| 2 | .726 | 12.099 | 71.566 | | | |
| 3 | .573 | 9.550 | 81.116 | | | |
| 4 | .488 | 8.134 | 89.251 | | | |
| 5 | .384 | 6.394 | 95.644 | | | |
| 6 | .261 | 4.356 | 100.000 | | | |



4.4.5 Dimensional Analysis of the Work Engagement Scale (UWES)

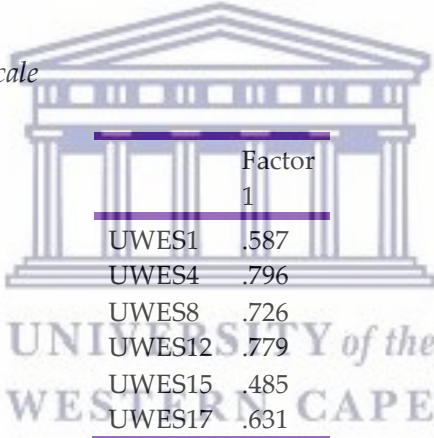
The three dimensions of the UWES proved to be uni-dimensional in nature. The results obtained confirmed that Vigour, Absorption and Dedication had only one factor each with an eigenvalue that is greater than 1. Most of the KMO values were between $> .70$ and $> .80$ with the exception of three items: UWES13, UWES14 and UWES15. Kaiser (as cited in Field, 2005) proposes that KMO index $< .50$ = unacceptable, values between $.50 - .70$ = Mediocre, values between $.70 - .80$ = good, values between $.80 - .90$ = Great whilst values $> .90$ = Superb. The KMO values were therefore satisfactory. The determinant values were greater than 0.00001 which depicts that there are no problems due to multicollinearity.

4.4.5.1 Vigour

The exploratory factor analysis depicts that the correlation matrix of the Vigour subscale is factor analyzable. This is clearly portrayed by the KMO and the Bartlett's test of sphericity values of .802 and 449.943 ($df = 15$; $p=0.000$) respectively. These values are adequate and satisfactory (Kaiser as cited in Field, 2005). The results proved that the Vigour subscale was found to be uni-dimensional in nature, with five iterations required. Only one factor with an eigen-value greater than 1 was obtained which explained 54.16% of the variance. The factor loadings were all above .50 with the exception of item UWES15 with a loading of .485. The results are depicted in Table 4.34.

TABLE 4.34

Factor Matrix for the Vigour Subscale



| | Factor 1 |
|--------|-------------|
| UWES1 | .587 |
| UWES4 | .796 |
| UWES8 | .726 |
| UWES12 | .779 |
| UWES15 | .485 |
| UWES17 | .631 |

KMO and Bartlett's Test

| | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .802 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 449.943 |
| | df | 15 |
| | Sig. | .000 |

| Total Variance Explained | | | | | | |
|--------------------------|-------|---------------------|--------------|-------------------------------------|---------------|--------------|
| Factor | Total | Initial Eigenvalues | | Extraction Sums of Squared Loadings | | |
| | | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.249 | 54.158 | 54.158 | 2.745 | 45.757 | 45.757 |
| 2 | .877 | 14.623 | 68.781 | | | |
| 3 | .615 | 10.247 | 79.028 | | | |
| 4 | .555 | 9.252 | 88.280 | | | |
| 5 | .424 | 7.071 | 95.351 | | | |
| 6 | .279 | 4.649 | 100.000 | | | |

4.4.5.2 Absorption

The correlation matrix of the Absorption subscale has been termed as factor analyzable. This is corroborated by the KMO index and the Bartlett's test of sphericity value of .845 and 498.119 ($df = 15$; $p=0.000$) respectively. These values are highly satisfactory (Kaiser as cited in Field, 2005). The Absorption subscale was found to be uni-dimensional in nature, with five iterations required. One factor with an eigen-value more than 1 was obtained which accounted for 56.69% of the variance. Factor loadings were all above .50 with the exception of item UWES14 which loaded on .453. The results are clearly shown in Table 4.35.

TABLE 4.35

Factor Matrix for the Absorption Subscale

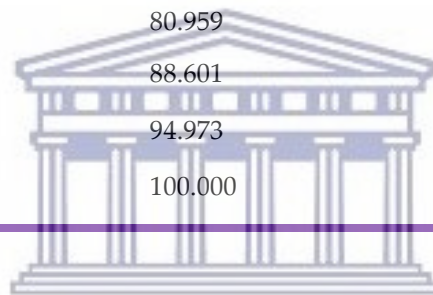
| | Factor 1 |
|--------|-------------|
| UWES3 | .688 |
| UWES6 | .769 |
| UWES9 | .764 |
| UWES11 | .805 |
| UWES14 | .453 |
| UWES16 | .653 |

KMO and Bartlett's Test

| | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .845 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 498.119 |
| | df | 15 |
| | Sig. | .000 |

Total Variance Explained

| Factor | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|--------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.402 | 56.693 | 56.693 | 2.928 | 48.806 | 48.806 |
| 2 | .876 | 14.602 | 71.295 | | | |
| 3 | .580 | 9.663 | 80.959 | | | |
| 4 | .459 | 7.642 | 88.601 | | | |
| 5 | .382 | 6.373 | 94.973 | | | |
| 6 | .302 | 5.027 | 100.000 | | | |



UNIVERSITY of the
WESTERN CAPE

4.4.5.3 Dedication

The KMO index and the Bartlett's test of sphericity value of .791 and 420.373 ($df = 10$; $p=0.000$) respectively was obtained for the Dedication subscale. The results of the correlation matrix of this subscale were found to be factor analyzable and uni-dimensional in nature. Five iterations were required and only one factor with an eigenvalue of more than 1 was obtained. This factor accounted for 59.68% of the variance. Factor loadings were all above .5 with the exception of item UWES13 which proved problematic. This item had been earlier termed unusable for further analysis by the reliability analysis conducted. The resultant figures are shown in Table 4.36.

TABLE 4.36*Factor Matrix for the Dedication Subscale*

| | Factor 1 |
|--------|-------------|
| UWES2 | .775 |
| UWES5 | .771 |
| UWES7 | .746 |
| UWES10 | .819 |
| UWES13 | .371 |

KMO and Bartlett's Test

| | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .791 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 420.373 |
| | df | 10 |
| | Sig. | .000 |

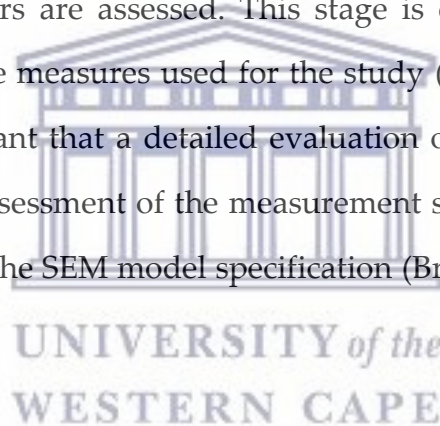
Total Variance Explained

| Factor | Total | Initial Eigenvalues | | Extraction Sums of Squared Loadings | | |
|--------|-------|---------------------|--------------|-------------------------------------|---------------|--------------|
| | | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.984 | 59.678 | 59.678 | 2.561 | 51.223 | 51.223 |
| 2 | .852 | 17.042 | 76.720 | | | |
| 3 | .502 | 10.038 | 86.757 | | | |
| 4 | .404 | 8.070 | 94.828 | | | |
| 5 | .259 | 5.172 | 100.000 | | | |

4.5 APPRAISING THE FIT OF THE MEASUREMENT MODELS WITH CONFIRMATORY FACTOR ANALYSIS IN LISREL

Confirmatory Factor Analysis (CFA) is a Structural Equation Modeling (SEM) tool that is concerned with measurement models. CFA allows for inferences to be made based on the relationships that exist between the observed indicators and latent factors (Brown, 2006). The CFA has been observed to be one of the most universally utilized statistical procedures in applied research because it offers answers to several pertinent questions raised by researchers.

To evaluate the measurement section of a model, the association between the latent variables and their indicators are assessed. This stage is crucial as it determines the validity and reliability of the measures used for the study (Diamantopoulos & Siguaw, 2000). It is therefore important that a detailed evaluation of the structural section of a model be preceded by an assessment of the measurement section of a model. The CFA must be conducted prior to the SEM model specification (Brown, 2006; Diamantopoulos & Siguaw, 2000).



The structural model depicts the relationships that exist between the latent variables whilst the measurement model portrays the relationship between a latent variable and its indicators. Therefore, to demonstrate a good fit of a model, it is important to establish that the manifest indicators indeed measure what the latent variables are supposed to measure. If the manifest measures are not authentic measures of the underlying latent variables, evaluating the model may turn problematic (Brown, 2006; Diamantopoulos & Siguaw, 2000). Diamantopoulos and Siguaw (2000) states that when assessing the RMSEA, values less than .05 are indicative of good fit, those between .05

and under .08 are of reasonable fit, values between .08 and .10 indicate a mediocre fit whilst values $>.10$ are regarded as poor fit.

4.5.1 Evaluating the fit of the ALI measurement model

Confirmatory factor analysis (CFA) was carried out on the items of the Authentic Leadership Inventory. In this study, the ALI measurement model was considered as an exogenous variable. Exogenous variables are independent variables which are not influenced by any other variable in the model but rather influences other variables (Diamantopoulos & Siguaaw, 2000). Continuous list wise deletion was employed and Robust Maximum Likelihood estimation method was utilized to produce needed estimates.

The fit indices and the path diagram provided by the LISREL program for the ALI model are depicted in Table 4.37 and Figure 4.1 below.

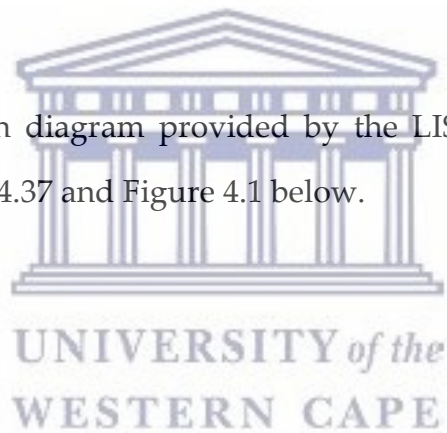


TABLE 4.37*Goodness-of-fit Statistics for the Authentic Leadership Inventory Measurement Model*

| Fit index | Value |
|---|---------------------|
| Degrees of Freedom | 406 |
| Minimum Fit Function Chi-Square | 272.043 (P = 0.0) |
| Normal Theory Weighted Least Squares Chi-Square | 266.060 (P = 0.0) |
| Satorra-Bentler Scaled Chi-Square | 187.261 (P = 0.000) |
| Root Mean Square Error of Approximation (RMSEA) | 0.0657 |
| 90 Percent Confidence Interval for RMSEA | (0.0513 ; 0.0799) |
| P-Value for Test of Close Fit (RMSEA < 0.05) | 0.0372 |
| Normed Fit Index (NFI) | 0.944 |
| Non-Normed Fit Index (NNFI) | 0.966 |
| Parsimony Normed Fit Index (PNFI) | 0.771 |
| Comparative Fit Index (CFI) | 0.972 |
| Incremental Fit Index (IFI) | 0.972 |
| Relative Fit Index (RFI) | 0.931 |
| Critical N (CN) | 151.401 |
| Root Mean Square Residual (RMR) | 0.0592 |
| Standardised RMR | 0.0623 |
| Goodness of Fit Index (GFI) | 0.864 |
| Adjusted Goodness of Fit Index (AGFI) | 0.811 |
| Parsimony Goodness of Fit Index (PGFI) | 0.622 |



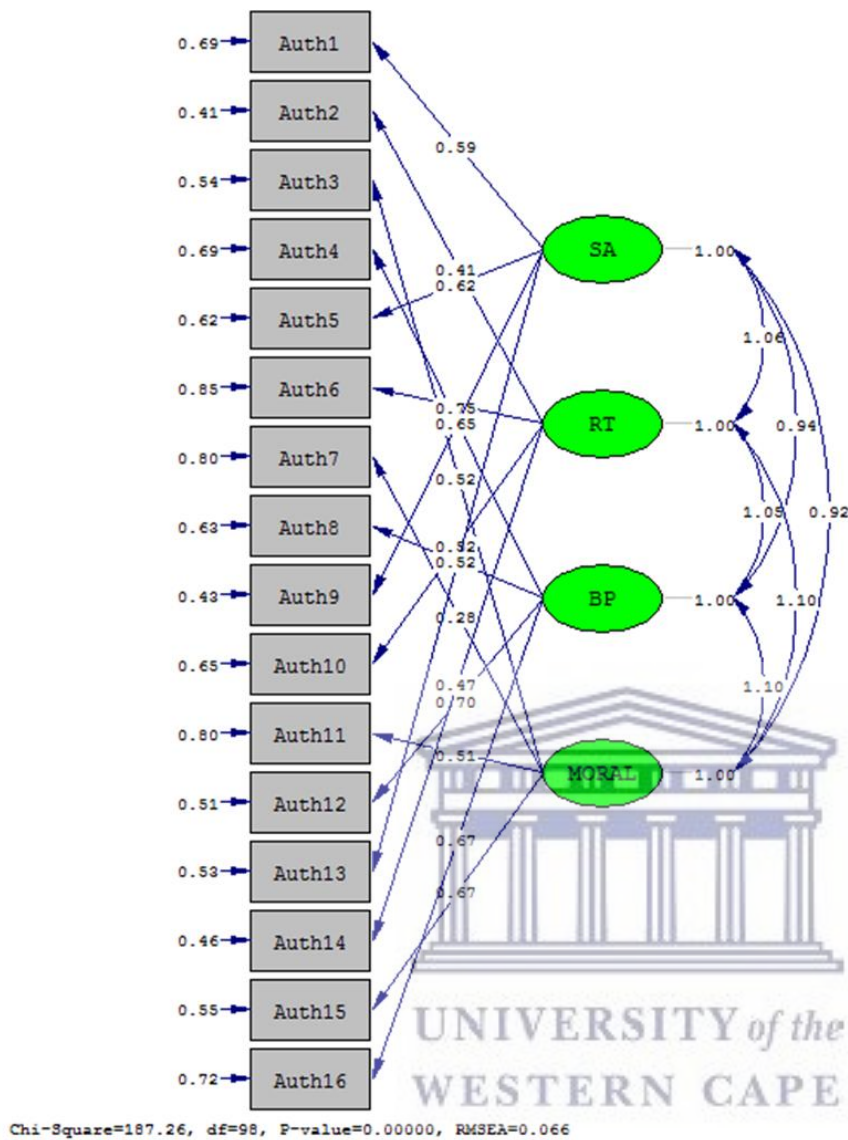


Figure 4.1: Path diagram for the authentic leadership inventory measurement model

The ALI measurement model converged in 9 iterations. The RMSEA value of 0.066 indicates a reasonable fit (Diamantopoulos & Siguaaw, 2000). The table shows that the null hypothesis of close model fit ($H_{02}: RMSEA \leq .05$) is rejected at a 5% significance level ($p > .05$). The RMR and standardized RMR values of .59 and .062 narrowly miss the good model fit ($< .05$) level.

When the results are assessed on a baseline model, the ALI measurement model achieved: NFI = (.94), NNFI = (.97), CFI (.97), IFI = (.97) and RFI = (.93). These figures exceeded the .90 good fit model mark (Diamantopoulos & Siguaaw, 2000; Hair et al., 2010; Kelloway, 1998). However, the GFI value = (.87), and the AGFI = (.81), barely missed the acceptable level of .90. However, the relative indices presented earlier indicated a good model fit.

4.5.2 Evaluating the fit of the Psychological Capital measurement model

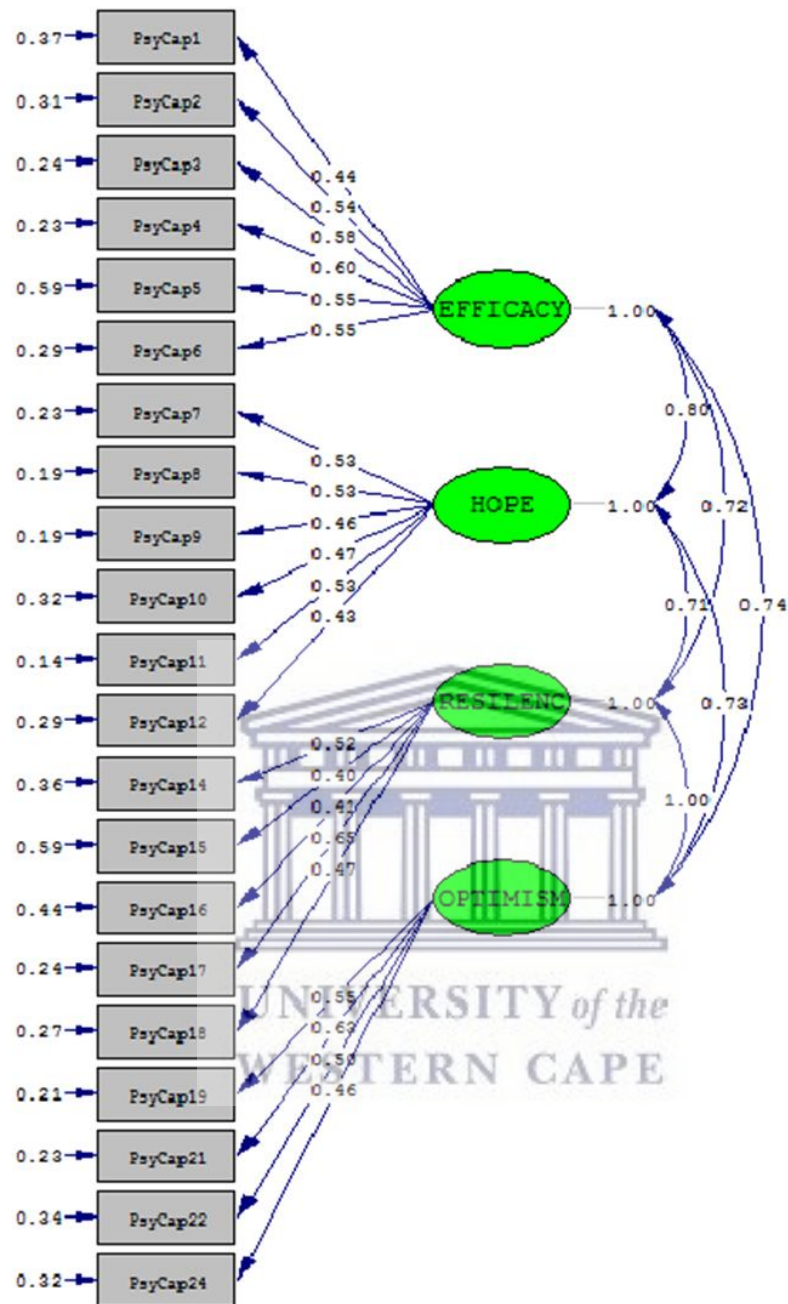
Confirmatory factor analysis (CFA) was carried out on the items of the Psychological Capital Questionnaire. In this study, the PsyCap measurement model was considered as an endogenous variable. Endogenous variables are dependent variables which can both influence or be influenced by other variables in the model (Diamantopoulos & Siguaaw, 2000). Continuous list wise deletion was employed and Robust Maximum Likelihood estimation method was utilized to produce needed estimates. The path diagram provided by the LISREL program for the ALI model is depicted in Table 4.38 and Figure 4.2.



TABLE 4.38*Goodness-of-fit Statistics for the Psychological Capital Measurement Model*

| Fit index | Value |
|---|---------------------|
| Degrees of Freedom | 183 |
| Minimum Fit Function Chi-Square | 366.937 (P = 0.0) |
| Normal Theory Weighted Least Squares Chi-Square | 349.994 (P = 0.0) |
| Satorra-Bentler Scaled Chi-Square | 269.108 (P = 0.000) |
| Root Mean Square Error of Approximation (RMSEA) | 0.0472 |
| 90 Percent Confidence Interval for RMSEA | (0.0346 ; 0.0589) |
| P-Value for Test of Close Fit (RMSEA < 0.05) | 0.638 |
| Normed Fit Index (NFI) | 0.962 |
| Non-Normed Fit Index (NNFI) | 0.986 |
| Parsimony Normed Fit Index (PNFI) | 0.839 |
| Comparative Fit Index (CFI) | 0.988 |
| Incremental Fit Index (IFI) | 0.988 |
| Relative Fit Index (RFI) | 0.957 |
| Critical N (CN) | 181.668 |
| Root Mean Square Residual (RMR) | 0.0332 |
| Standardised RMR | 0.0570 |
| Goodness of Fit Index (GFI) | 0.864 |
| Adjusted Goodness of Fit Index (AGFI) | 0.828 |
| Parsimony Goodness of Fit Index (PGFI) | 0.684 |





Chi-Square=269.11, df=183, F-value=0.00004, RMSEA=0.047

Figure 4.2: Path diagram for the psychological capital measurement model

Table 4.38 depicts the full spectrum of the “Goodness of Fit Statistics” of the PsyCap model. The measurement model converged in 10 iterations. The RMSEA value is 0.0472 which indicates a good fit (Diamantopoulos & Siguaaw, 2000). The upper bound of the

90 percent confidence interval for RMSEA (0.35; 0.059) marginally misses the critical cutoff value of .05, thereby confirming a reasonable model fit.

The RMR value of .033 equally depicts an acceptable fit whilst the standardized RMR value of .057 narrowly missed the good model fit ($< .05$) level (Diamantopoulos & Siguaaw, 2000; Hair et al., 2010).

The PsyCap measurement model when assessed achieved: NFI = (.96), NNFI = (.99), CFI (.99), IFI = (.99) and RFI = (.96). These figures apparently exceeded the .90 good fit model mark (Diamantopoulos & Siguaaw, 2000; Hair et al., 2010; Kelloway, 1998). However, the GFI value = (.86), and the AGFI = (.82), narrowly missed the acceptable level of .90. However, the relative indices presented earlier indicated a good fit.

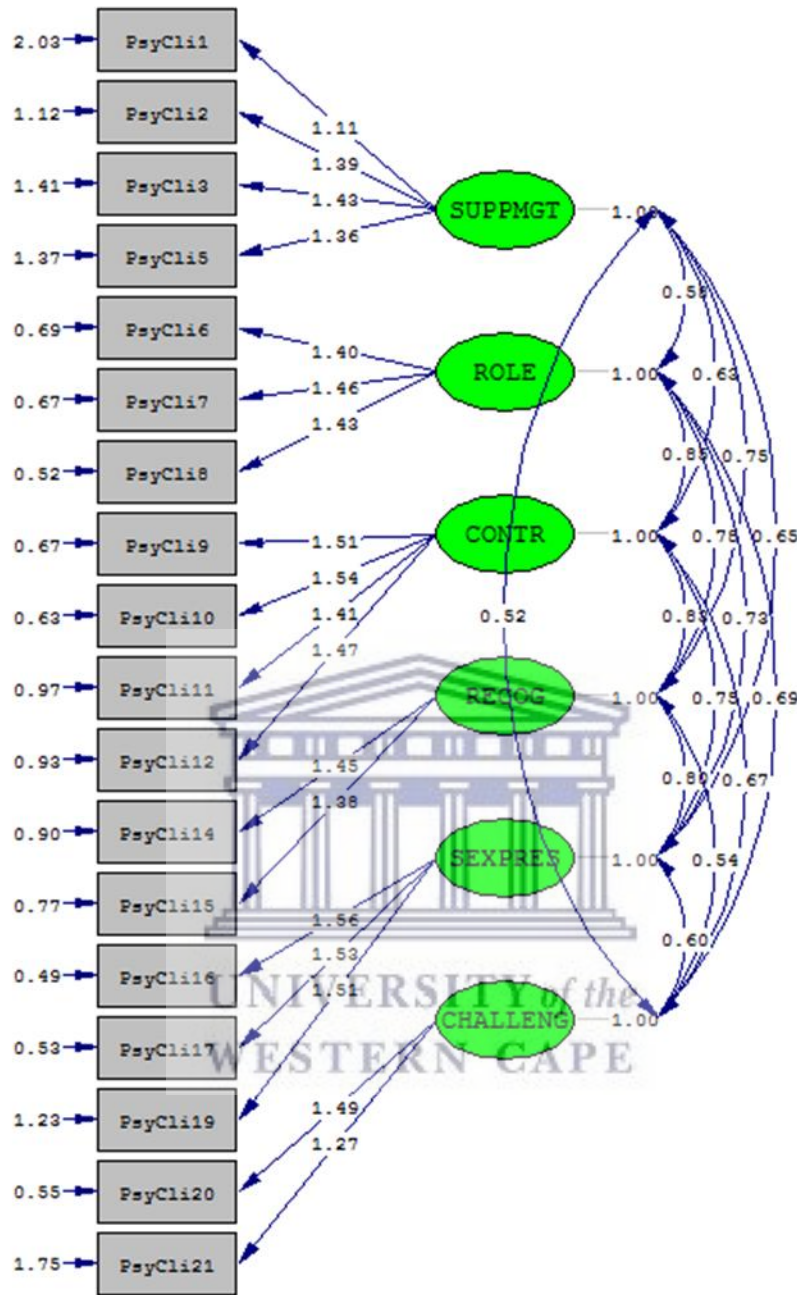
4.5.3 Evaluating the fit of the Psychological Climate measurement model

Confirmatory factor analysis (CFA) was carried out on the items of the Psychological Climate Questionnaire. The psychological climate measurement model was considered as an endogenous variable because it was treated as a dependent variable which could both influence or be influenced by other variables in the model (Diamantopoulos & Siguaaw, 2000). Continuous list wise deletion was employed and Robust Maximum Likelihood estimation method was utilized to produce needed estimates. The path diagram provided by the LISREL program for the ALI model is depicted in Table 4.39 and Figure 4.3.

TABLE 4.39*Goodness-of-fit Statistics for the Psychological Climate Measurement Model*

| Fit index | Value |
|---|---------------------|
| Degrees of Freedom | 120 |
| Minimum Fit Function Chi-Square | 256.693 (P = 0.0) |
| Normal Theory Weighted Least Squares Chi-Square | 251.222 (P = 0.0) |
| Satorra-Bentler Scaled Chi-Square | 179.597(P=0.000350) |
| Root Mean Square Error of Approximation (RMSEA) | 0.0485 |
| 90 Percent Confidence Interval for RMSEA | (0.0330 ; 0.0627) |
| P-Value for Test of Close Fit (RMSEA < 0.05) | 0.552 |
| Normed Fit Index (NFI) | 0.980 |
| Non-Normed Fit Index (NNFI) | 0.991 |
| Parsimony Normed Fit Index (PNFI) | 0.768 |
| Comparative Fit Index (CFI) | 0.993 |
| Incremental Fit Index (IFI) | 0.993 |
| Relative Fit Index (RFI) | 0.974 |
| Critical N (CN) | 187.743 |
| Root Mean Square Residual (RMR) | 0.124 |
| Standardised RMR | 0.0401 |
| Goodness of Fit Index (GFI) | 0.883 |
| Adjusted Goodness of Fit Index (AGFI) | 0.834 |
| Parsimony Goodness of Fit Index (PGFI) | 0.620 |





Chi-Square=179.60, df=120, P-value=0.00035, RMSEA=0.049

Figure 4.3: Path diagram for the psychological climate measurement model

The measurement model converged in 8 iterations. An assessment of the goodness-of-fit indices shows that the model has achieved good model fit. A sample RMSEA value of .049 signifies a good fit (Diamantopoulos & Sigauw, 2000). Table 4.39 portrays that the

null hypothesis of close model fit (H_{02} : RMSEA \leq .05) is not rejected at a 5% significance level ($p > .05$). The standardized RMR values of .040 marginally miss the good model fit (< 0.05) level, whilst the RMR value of 0.124 failed to achieve the .05 threshold.

The results of the incremental fit measures when compared to the baseline model indicate that, the Psychological Climate measurement model achieved NFI (.98), NNFI (.99), CFI (.99), IFI (.99) and RFI (.97) indices exceeding .90, which indicates a good fit (Diamantopoulos & Siguaaw, 2000; Hair et al., 2010; Kelloway, 1998). Therefore, these relative indices seem to portray a reasonably positive picture of model fit. The GFI and the AGFI failed to reach the .90 level indicative of good model fit.

4.5.4 Evaluating the fit of the Turnover Intention measurement model

Confirmatory factor analysis (CFA) was carried out on the items of the Turnover Intention Questionnaire. In this study, Turnover Intention measurement model was considered as an endogenous variable. A full spectrum of the fit indices and the path diagram provided by the LISREL program for the ALI model is depicted in Table 4.40.

TABLE 4.40*Goodness-of-fit Statistics for the Turnover Intention Measurement Model*

| Fit index | Value |
|---|----------------------|
| Degrees of Freedom | 9 |
| Minimum Fit Function Chi-Square | 40.650 (P = 0.000) |
| Normal Theory Weighted Least Squares Chi-Square | 39.543 (P = 0.000) |
| Satorra-Bentler Scaled Chi-Square | 27.305 (P = 0.00125) |
| Root Mean Square Error of Approximation (RMSEA) | 0.0982 |
| 90 Percent Confidence Interval for RMSEA | (0.0573 ; 0.141) |
| P-Value for Test of Close Fit (RMSEA < 0.05) | 0.0286 |
| Normed Fit Index (NFI) | 0.967 |
| Non-Normed Fit Index (NNFI) | 0.963 |
| Parsimony Normed Fit Index (PNFI) | 0.580 |
| Comparative Fit Index (CFI) | 0.978 |
| Incremental Fit Index (IFI) | 0.978 |
| Relative Fit Index (RFI) | 0.945 |
| Critical N (CN) | 168.427 |
| Root Mean Square Residual (RMR) | 0.132 |
| Standardised RMR | 0.0432 |
| Goodness of Fit Index (GFI) | 0.941 |
| Adjusted Goodness of Fit Index (AGFI) | 0.863 |
| Parsimony Goodness of Fit Index (PGFI) | 0.403 |

The measurement model converged in 7 iterations. An assessment of the goodness-of-fit indices shows that the model did not achieve a good model fit with an RMSEA value of .098. Diamantopoulos and Siguaaw (2000) state that when assessing the RMSEA, values less than .05 are indicative of good fit, those between .05 and under .08 are of reasonable

fit, values between .08 and .10 indicate a mediocre fit whilst values $>.10$ are regarded as poor fit.

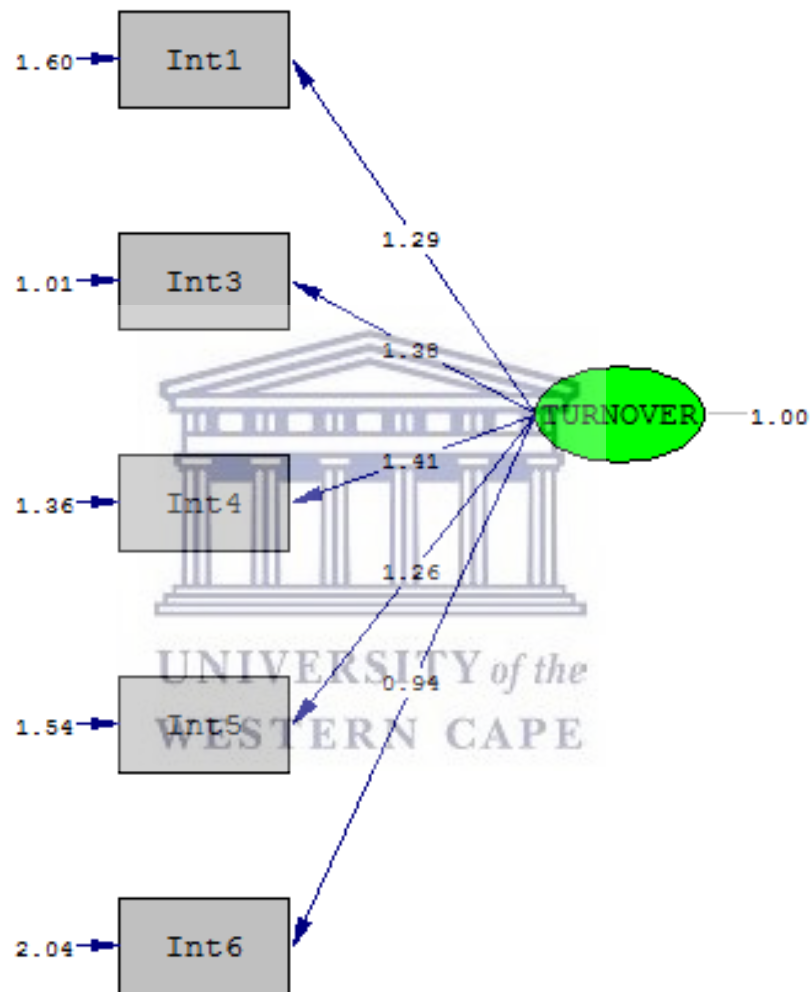
TABLE 4.41

Goodness-of-fit Statistics for the Turnover Intention Measurement Model 2

| Fit index | Value |
|---|---------------------|
| Degrees of Freedom | 5 |
| Minimum Fit Function Chi-Square | 14.146 (P = 0.0147) |
| Normal Theory Weighted Least Squares Chi-Square | 12.975 (P = 0.0236) |
| Satorra-Bentler Scaled Chi-Square | 8.710 (P = 0.121) |
| Root Mean Square Error of Approximation (RMSEA) | 0.0593 |
| 90 Percent Confidence Interval for RMSEA | (0.0 ; 0.123) |
| P-Value for Test of Close Fit (RMSEA < 0.05) | 0.340 |
| Normed Fit Index (NFI) | 0.984 |
| Non-Normed Fit Index (NNFI) | 0.986 |
| Parsimony Normed Fit Index (PNFI) | 0.492 |
| Comparative Fit Index (CFI) | 0.993 |
| Incremental Fit Index (IFI) | 0.993 |
| Relative Fit Index (RFI) | 0.968 |
| Critical N (CN) | 366.528 |
| Root Mean Square Residual (RMR) | 0.0912 |
| Standardised RMR | 0.0289 |
| Goodness of Fit Index (GFI) | 0.976 |
| Adjusted Goodness of Fit Index (AGFI) | 0.928 |
| Parsimony Goodness of Fit Index (PGFI) | 0.325 |

1.1.1 Evaluating the fit of the Revised Turnover Intention measurement model

Based on the high theta delta values between item int2 and item int1, the item with a lower value for the completely standardized factor loadings was excluded as it had a lower value. This suggests that the two items were measuring the same thing. The newly obtained model is presented in Table 4.41 and Figure 4.4



Chi-Square=8.71, df=5, P-value=0.12121, RMSEA=0.059

Figure 4.4: Path diagram for the turnover intention measurement model

The Turnover Intention measurement model converged in 4 iterations. An assessment of the goodness-of-fit indices shows that the model has achieved reasonable model fit. A RMSEA value of .059 depicting a reasonable fit Diamantopoulos and Siguaaw (2000) state that when assessing the RMSEA, values less than .05 are indicative of good fit, those between .05 and under .08 are of reasonable fit, values between .08 and .10 indicate a mediocre fit whilst values $>.10$ are regarded as poor fit.

LISREL 8.80 also explicitly tests the null hypothesis of close fit. Table 4.41 indicates that the null hypothesis of close model fit ($H_{02}: RMSEA \leq .05$) is not rejected at a 5% significance level ($p > .05$). The RMR value of .091 clearly miss the good model fit (< 0.05) level, whilst the standardized RMR value of .0289 portrays a good model fit (Diamantopoulos & Siguaaw, 2000; Hair et al., 2010).

Furthermore, the results of the Goodness-of-fit measures in Table 4.41 indicate that when the results are assessed in parallel with a baseline model, the Turnover Intention measurement model achieved: NFI = (.98), NNFI = (.99), CFI = (.99), IFI = (.99), RFI = (.97), GFI = (.98) and the AGFI = (.93). These figures clearly exceeded .90, which Diamantopoulos and Siguaaw (2000); Hair et al. (2010) and Kelloway (1998) portrayed a good model fit diagram.

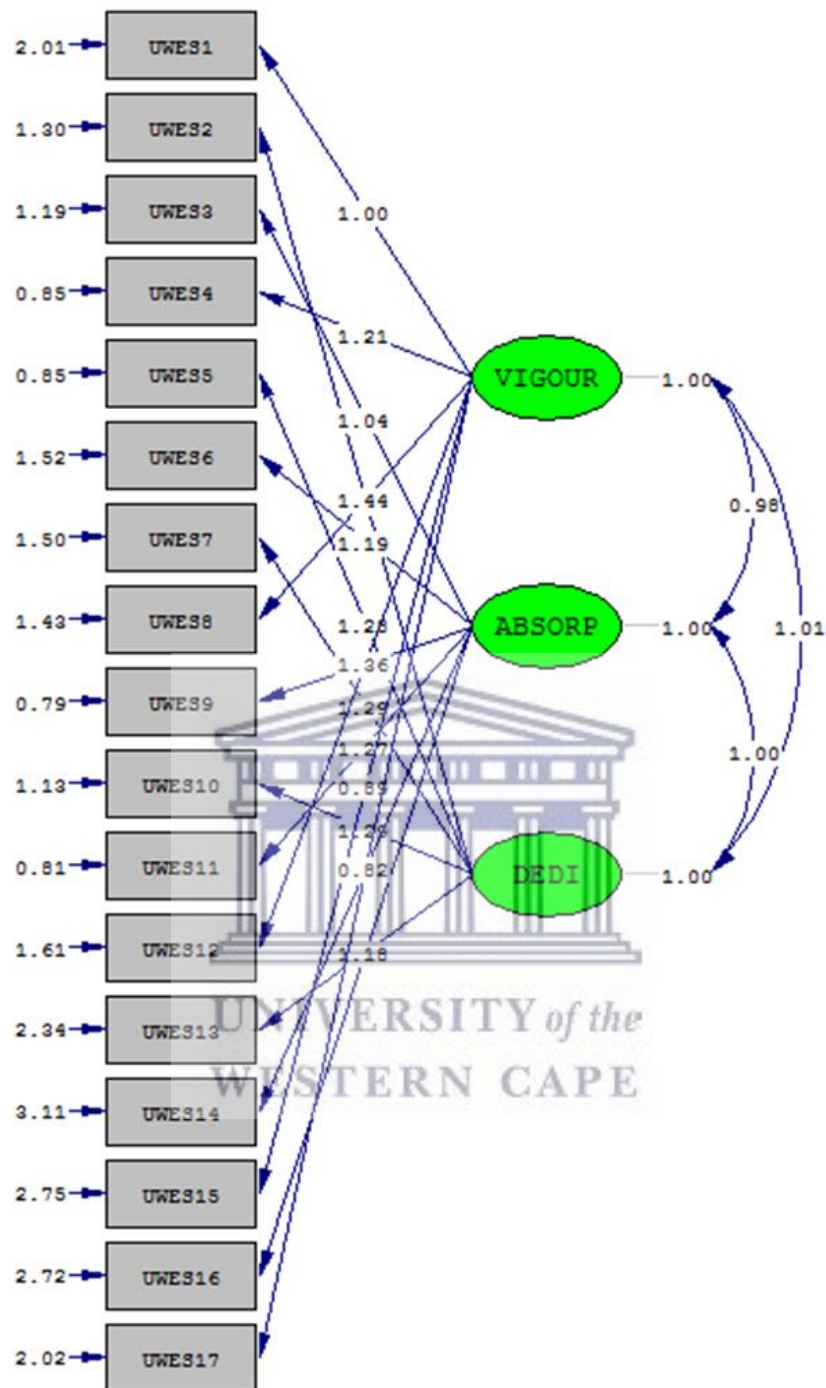
4.5.5 Evaluating the fit of the Work Engagement measurement model

Confirmatory factor analysis (CFA) was carried out on the 17-item Work Engagement Questionnaire. In this study, the Work Engagement measurement model was considered as an endogenous variable. A full spectrum of the fit indices and the path diagram provided by the LISREL program for the UWES model is depicted in Table 4.42 and Figure 4.5.

TABLE 4.42*Goodness-of-fit Statistics for the Work Engagement Measurement Model*

| Fit index | Value |
|---|-------------------|
| Degrees of Freedom | 116 |
| Minimum Fit Function Chi-Square | 518.020 (P = 0.0) |
| Normal Theory Weighted Least Squares Chi-Square | 594.635 (P = 0.0) |
| Satorra-Bentler Scaled Chi-Square | 417.576 (P = 0.0) |
| Root Mean Square Error of Approximation (RMSEA) | 0.111 |
| 90 Percent Confidence Interval for RMSEA | (0.0996 ; 0.123) |
| P-Value for Test of Close Fit (RMSEA < 0.05) | 0.000 |
| Normed Fit Index (NFI) | 0.932 |
| Non-Normed Fit Index (NNFI) | 0.942 |
| Parsimony Normed Fit Index (PNFI) | 0.795 |
| Comparative Fit Index (CFI) | 0.950 |
| Incremental Fit Index (IFI) | 0.950 |
| Relative Fit Index (RFI) | 0.921 |
| Critical N (CN) | 78.990 |
| Root Mean Square Residual (RMR) | 0.249 |
| Standardised RMR | 0.0780 |
| Goodness of Fit Index (GFI) | 0.751 |
| Adjusted Goodness of Fit Index (AGFI) | 0.672 |
| Parsimony Goodness of Fit Index (PGFI) | 0.569 |





Chi-Square=417.58, df=116, P-value=0.00000, RMSEA=0.111

Figure 4.5: Path diagram for the work engagement measurement model

The measurement model converged in 12 iterations. An assessment of the goodness-of-fit indices shows that the model did not produce a good fit with the sample. A sample

RMSEA value of .11 indicates a poor model fit. Diamantopoulos and Siguaw (2000) posit that when assessing the RMSEA, values less than .05 are indicative of good fit, those between .05 and under .08 are of reasonable fit, values between .08 and .10 indicate a mediocre fit whilst values $>.10$ are regarded as poor fit.

Table 4.42 indicates that the null hypothesis of close model fit ($H_{02}: RMSEA \leq .05$) is not rejected at a 5% significance level ($p > .05$). The RMR value of .25 clearly exceed the good model fit (< 0.05) level, whilst the standardized RMR value of .078 also miss a good model fit baseline (Diamantopoulos & Siguaw, 2000; Hair et al., 2010).

Furthermore, the results of the Goodness-of-fit measures in Table 4.42 indicate that when the results are assessed in parallel with a baseline model, the Work Engagement measurement model achieved: NFI = (.93), NNFI = (.94), CFI = (.95), IFI = (.95), RFI = (.92), GFI = (.75) and the AGFI = (.67).

In view of the poor fit obtained using the UWES-17 questionnaire, a decision was therefore made to use the short version of the Work Engagement Scale by the same authors (Schaufeli et al., 2006).

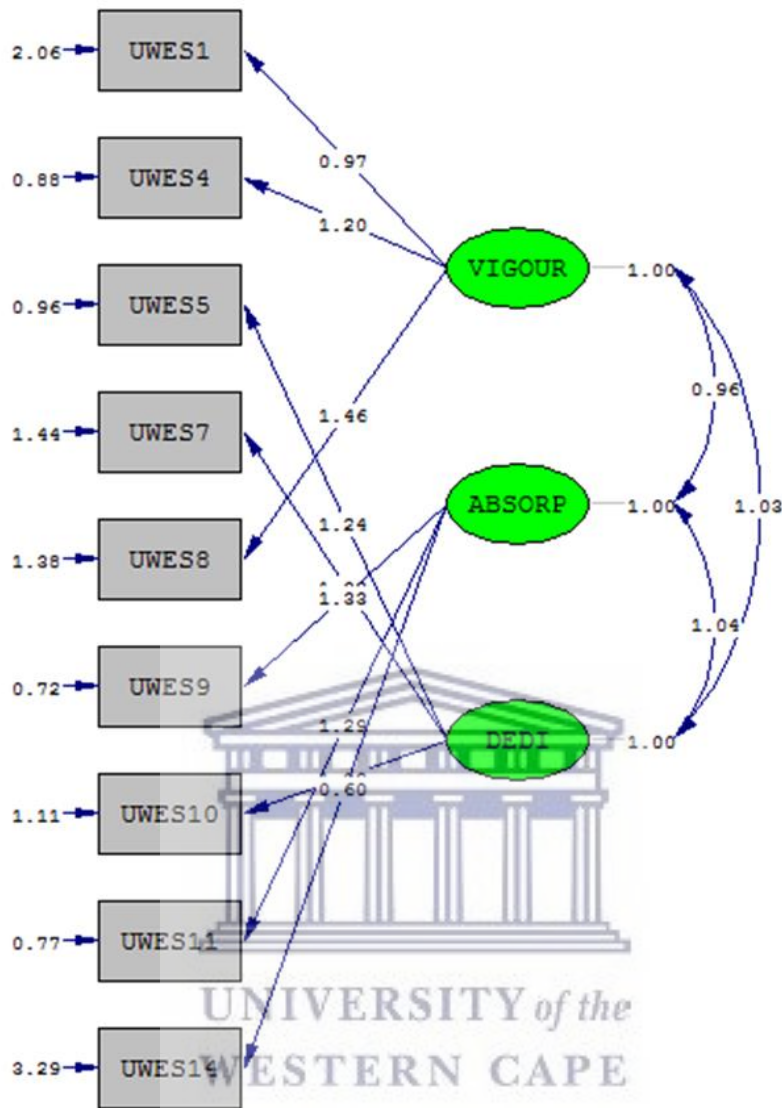
4.5.6 Evaluating the fit of the Work Engagement measurement model (Short Questionnaire)

Confirmatory factor analysis (CFA) was subsequently carried out on the 9-item UWES because the 17-item UWES failed to provide a good fit with the model. A full spectrum of the fit indices and the path diagram provided by the LISREL program for the short model is depicted in Table 4.43 and Figure 4.6 below.

TABLE 4.43*Goodness-of-fit Statistics for the Work Engagement Measurement Model (short questionnaire)*

| Fit index | Value |
|---|--------------------|
| Degrees of Freedom | 24 |
| Minimum Fit Function Chi-Square | 144.865 (P = 0.0) |
| Normal Theory Weighted Least Squares Chi-Square | 146.156 (P = 0.0) |
| Satorra-Bentler Scaled Chi-Square | 82.225 (P = 0.000) |
| Root Mean Square Error of Approximation (RMSEA) | 0.107 |
| 90 Percent Confidence Interval for RMSEA | (0.0824 ; 0.133) |
| P-Value for Test of Close Fit (RMSEA < 0.05) | 0.000170 |
| Normed Fit Index (NFI) | 0.963 |
| Non-Normed Fit Index (NNFI) | 0.960 |
| Parsimony Normed Fit Index (PNFI) | 0.642 |
| Comparative Fit Index (CFI) | 0.973 |
| Incremental Fit Index (IFI) | 0.973 |
| Relative Fit Index (RFI) | 0.944 |
| Critical N (CN) | 111.292 |
| Root Mean Square Residual (RMR) | 0.151 |
| Standardised RMR | 0.0538 |
| Goodness of Fit Index (GFI) | 0.867 |
| Adjusted Goodness of Fit Index (AGFI) | 0.750 |
| Parsimony Goodness of Fit Index (PGFI) | 0.462 |





Chi-Square=82.23, df=24, P-value=0.00000, RMSEA=0.107

Figure 4.6: Path diagram for the work engagement measurement model (short questionnaire)

The measurement model converged in 12 iterations. An assessment of the goodness-of-fit indices shows that the model did not produce a good fit with the sample. A sample RMSEA value of .107 indicates a mediocre fit (Diamantopoulos & Sigauw, 2000).

Furthermore, the results of the Goodness-of-fit measures in Table 4.43 indicate that the Work Engagement measurement model (short questionnaire) achieved: NFI = (.96),

NNFI = (.96), CFI = (.97), IFI = (.97), RFI = (.94), RMR = (.15), SRMR = (.05), GFI = (.88) and the AGFI = (.75). A decision was made to inspect the theta-delta modification indices as the value was large.

4.5.7 Evaluating the fit of the Work Engagement measurement model (Short Questionnaire - Final)

TABLE 4.44

Goodness-of-fit Statistics for the Work Engagement Measurement Model (short questionnaire 2)

| Fit index | Value |
|---|---------------------|
| Degrees of Freedom | 17 |
| Minimum Fit Function Chi-Square | 66.521 (P = 0.000) |
| Normal Theory Weighted Least Squares Chi-Square | 60.594 (P = 0.000) |
| Satorra-Bentler Scaled Chi-Square | 32.527 (P = 0.0129) |
| Root Mean Square Error of Approximation (RMSEA) | 0.0658 |
| 90 Percent Confidence Interval for RMSEA | (0.0297 ; 0.0997) |
| P-Value for Test of Close Fit (RMSEA < 0.05) | 0.204 |
| Normed Fit Index (NFI) | 0.980 |
| Non-Normed Fit Index (NNFI) | 0.984 |
| Parsimony Normed Fit Index (PNFI) | 0.595 |
| Comparative Fit Index (CFI) | 0.990 |
| Incremental Fit Index (IFI) | 0.991 |
| Relative Fit Index (RFI) | 0.968 |
| Critical N (CN) | 217.736 |
| Root Mean Square Residual (RMR) | 0.129 |
| Standardised RMR | 0.0428 |
| Goodness of Fit Index (GFI) | 0.933 |
| Adjusted Goodness of Fit Index (AGFI) | 0.858 |
| Parsimony Goodness of Fit Index (PGFI) | 0.441 |

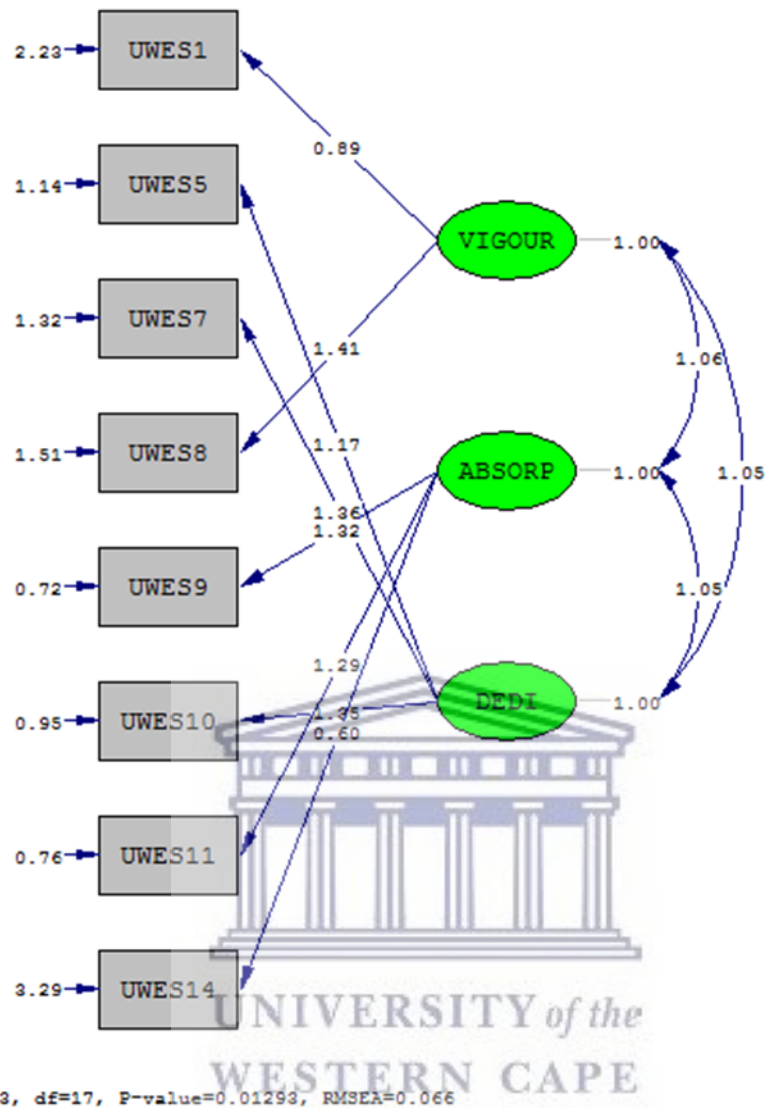


Figure 4.7: Path diagram for the work engagement measurement model (short questionnaire 2)

One of the methods to improve the fit of the model is attained through the freeing of model parameters (Diamantopoulos & Siguaw, 2000). This led to the investigation of the modification indices of THETA-DELTA and some concerns were highlighted. Model modification indices are intended to answer the question whether any of the currently fixed parameters, when freed in the model, would significantly improve the parsimonious fit of the model. Modification indices (MI) indicate the extent to which the chi-square fit statistic decreases when a currently fixed parameter in the model is freed

and the model re-estimated (Joreskog & Sorbom, 1993). Large modification index values (> 6.6349 at a significance level of 0.01) are indicative of parameters that, if set free, would improve the fit of the model significantly ($p < 0.01$) (Diamantopoulos & Siguaaw, 2000; Joreskog & Sorbom, 1993).

The Modification Indices magnitudes for THETA-DELTA for some of the items were problematic. A decision was made after an examination of the items to delete the item with lower loadings in the Completely Standardized Solution matrix. After the deletion of the item UWES4 Confirmatory Factor analysis was performed on the remaining items in the UWES scale. The model fit improved considerably.

The measurement model refined using the theta-delta indices converged in 8 iterations. An assessment of the goodness-of-fit indices now portrays that the model produced a good fit with the sample. The RMSEA value of .066 indicates a reasonable fit (Diamantopoulos & Siguaaw, 2000). Table 4.44 indicates that the null hypothesis of close model fit ($H_0: RMSEA \leq .05$) is not rejected at a 5% significance level ($p > .05$). The RMR value of .129 clearly exceed the good model fit (< 0.05) level, whilst the standardized RMR value of .0428 shows the good model fit baseline (Diamantopoulos & Siguaaw, 2000; Hair et al., 2010).

Furthermore, the results of the Goodness-of-fit measures in Table 4.44 indicate that when the results are assessed in parallel with a baseline model, the Work Engagement measurement model achieved: NFI = (.98), NNFI = (.98), CFI = (.99), IFI = (.99), RFI = (.97), GFI = (.93) and the AGFI = (.86). These figures clearly exceeded .90, which (Diamantopoulos & Siguaaw, 2000; Hair et al., 2010; Kelloway, 1998) portrayed an irrefutable model fit diagram.

4.6 OVERALL ASSESSMENT OF THE MEASUREMENT MODEL FIT WITH CONFIRMATORY FACTOR ANALYSIS IN LISREL

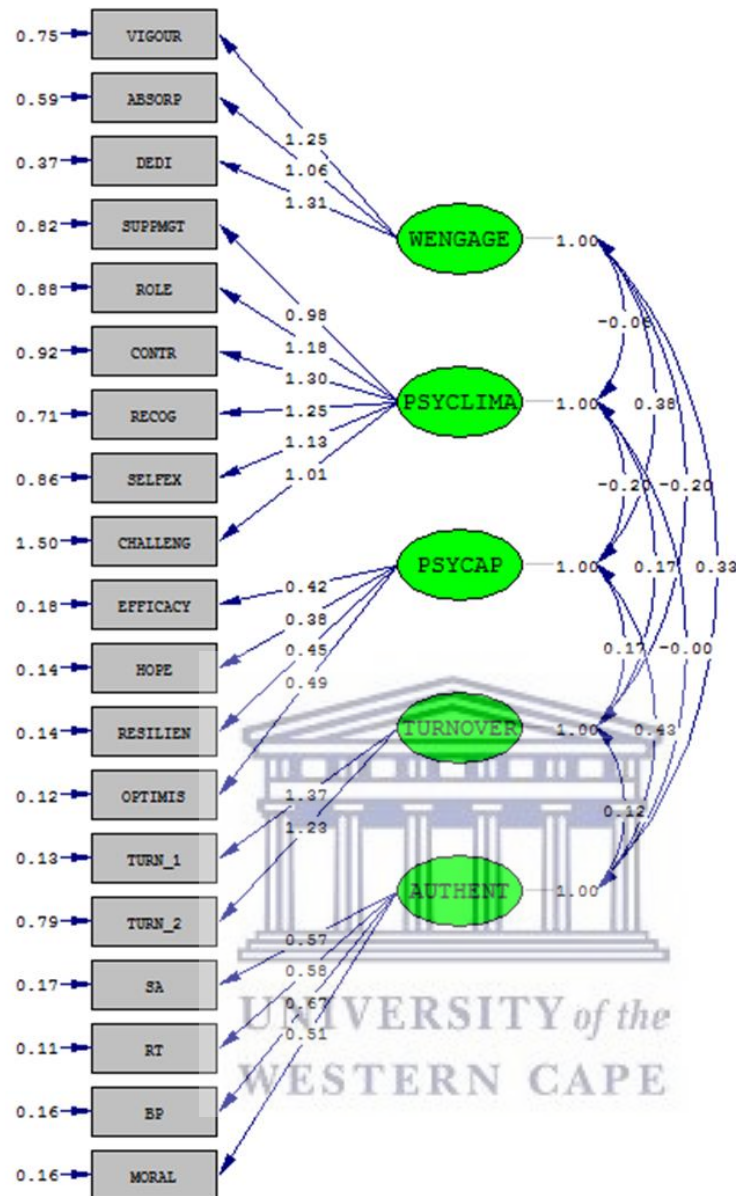
Diamantopoulos and Siguaw (2000) emphasized that assessing a model's overall fit is crucial in determining the extent to which the model as a whole tallies with the observed data and results. Structural Equation Modelling thus indicates the covariance patterns found within the observed variables through the relationships portrayed by the measurement and structural models.

The LISREL programme, version 8.80 (Jöreskog & Sörbom, 2006b) was used to perform a confirmatory factor analysis on the overall measurement model to determine the fit of the model. Item parcels were created in SPSS to represent the latent variables. The uni-dimensional scales were used in the creation of item parcels. In the case of turnover intention, two parcels were randomly created because it did not have subscales – in other words, it was uni-dimensional. The robust maximum likelihood estimation method was used to produce the estimates due to the failure of the data to satisfy the multivariate normality assumption. The overall measurement model fit indices and the goodness of fit statistics are presented in Table 4.45 and briefly discussed.

TABLE 4.45*Goodness-of-fit Statistics for the Overall Measurement Model*

| Fit index | Value |
|---|--------------------|
| Degrees of Freedom | 142 |
| Minimum Fit Function Chi-Square | 309.244 (P = 0.00) |
| Normal Theory Weighted Least Squares Chi-Square | 308.806 (P = 0.00) |
| Satorra-Bentler Scaled Chi-Square | 280.621 (P = 0.00) |
| Root Mean Square Error of Approximation (RMSEA) | 0.0680 |
| 90 Percent Confidence Interval for RMSEA | (0.0563 ; 0.0797) |
| P-Value for Test of Close Fit (RMSEA < 0.05) | 0.00688 |
| Normed Fit Index (NFI) | 0.917 |
| Non-Normed Fit Index (NNFI) | 0.948 |
| Parsimony Normed Fit Index (PNFI) | 0.761 |
| Comparative Fit Index (CFI) | 0.957 |
| Incremental Fit Index (IFI) | 0.957 |
| Relative Fit Index (RFI) | 0.900 |
| Critical N (CN) | 139.439 |
| Root Mean Square Residual (RMR) | 0.0884 |
| Standardised RMR | 0.0584 |
| Goodness of Fit Index (GFI) | 0.867 |
| Adjusted Goodness of Fit Index (AGFI) | 0.821 |
| Parsimony Goodness of Fit Index (PGFI) | 0.648 |





Chi-Square=280.62, df=142, P-value=0.00000, RMSEA=0.068

Figure 4.8: Path diagram for the overall measurement model

Table 4.45 and Figure 4.8 indicates the Goodness of Fit Statistics and path diagram for the overall measurement model of the observed relationships between authentic leadership, psychological capital, psychological climate, turnover intention and employee engagement. The measurement model converged in 12 iterations with the RMSEA value of 0.0680 depicting a reasonable acceptable fit (Diamantopoulos &

Siguaw, 2000). The upper bound of the 90 percent confidence interval for RMSEA (0.056; 0.079), though marginally missing the critical cutoff value of .05 still confirms a reasonable model fit. The standardized RMR value of .058 marginally missed the good model fit (< .05) level whilst the RMR value of .088 clearly misses the acceptable fit mark (Diamantopoulos & Siguaaw, 2000; Hair et al., 2010).

The overall measurement model when assessed achieved: NFI = (.92), NNFI = (.95), CFI (.96), IFI = (.96) and RFI = (.90). These figures apparently exceeded the .90 good fit model mark (Diamantopoulos & Siguaaw, 2000; Hair et al., 2010; Kelloway, 1998). However, the goodness-of-fit index (GFI) indicated the GFI value = (.87), and the AGFI = (.82). The goodness-of-fit index (GFI) is considered the most reliable measure that determines absolute fit (Diamantopoulos & Siguaaw, 2000). These values indicate a satisfactory fit.

The Satorra-Bentler Scaled χ^2 value, (χ^2 value) is 280.621 ($p = 0.0$). This value implies that a significant test statistic ($p < 0.05$) was achieved. It is apparent that this comprehensive model did not replicate the observed covariance matrix to the extent that depicts the right accuracy (Kelloway, 1998). Since the relative indices presented indicated a disputable model fit, the exact fit null hypothesis H_{08} is therefore rejected.

4.7 COMPREHENSIVE STRUCTURAL MODEL FIT

Table 4.46 and Figure 4.9 indicate the Goodness of Fit Statistics and path diagram for the fitted structural model of the observed relationships between authentic leadership, psychological capital, psychological climate, turnover intention and employee engagement. The RMSEA value of 0.0712 depicts a reasonable acceptable fit (Diamantopoulos & Siguaaw, 2000). The upper bound of the 90 percent confidence interval for RMSEA (0.0597; 0.0826), though marginally missing the critical cutoff value of .05 still confirms a reasonable model fit. The standardized RMR value of .803 and the

RMR value of .118 also produce the acceptable fit mark (Diamantopoulos & Siguaaw, 2000; Hair et al., 2010).

The overall measurement model when assessed achieved: NFI = (.91), NNFI = (.94), CFI (.95), IFI = (.95) and RFI = (.86). These figures apparently exceeded the .90 good fit model mark (Diamantopoulos & Siguaaw, 2000; Hair et al., 2010; Kelloway, 1998). The values of the GFI value = (.86) and the AGFI = (.82) indicate a satisfactory fit.

The Satorra-Bentler Scaled p-value, (χ^2 value) is 299.981 ($p = 0.0$). This value implies that a significant test statistic ($p < 0.05$) was achieved. It is apparent that this comprehensive model did not replicate the observed covariance matrix to the right degree (Kelloway, 1998).



UNIVERSITY *of the*
WESTERN CAPE

TABLE 4.46*Goodness-of-fit Statistics for the Comprehensive Structural Model*

| Fit index | Value |
|---|--------------------|
| Degrees of Freedom | 145 |
| Minimum Fit Function Chi-Square | 330.153 (P = 0.00) |
| Normal Theory Weighted Least Squares Chi-Square | 329.491 (P = 0.00) |
| Satorra-Bentler Scaled Chi-Square | 299.981 (P = 0.00) |
| Root Mean Square Error of Approximation (RMSEA) | 0.0712 |
| 90 Percent Confidence Interval for RMSEA | (0.0597 ; 0.0826) |
| P-Value for Test of Close Fit (RMSEA < 0.05) | 0.00158 |
| Normed Fit Index (NFI) | 0.911 |
| Non-Normed Fit Index (NNFI) | 0.943 |
| Parsimony Normed Fit Index (PNFI) | 0.772 |
| Comparative Fit Index (CFI) | 0.952 |
| Incremental Fit Index (IFI) | 0.952 |
| Relative Fit Index (RFI) | 0.895 |
| Critical N (CN) | 132.904 |
| Root Mean Square Residual (RMR) | 0.118 |
| Standardised RMR | 0.0803 |
| Goodness of Fit Index (GFI) | 0.859 |
| Adjusted Goodness of Fit Index (AGFI) | 0.815 |
| Parsimony Goodness of Fit Index (PGFI) | 0.655 |



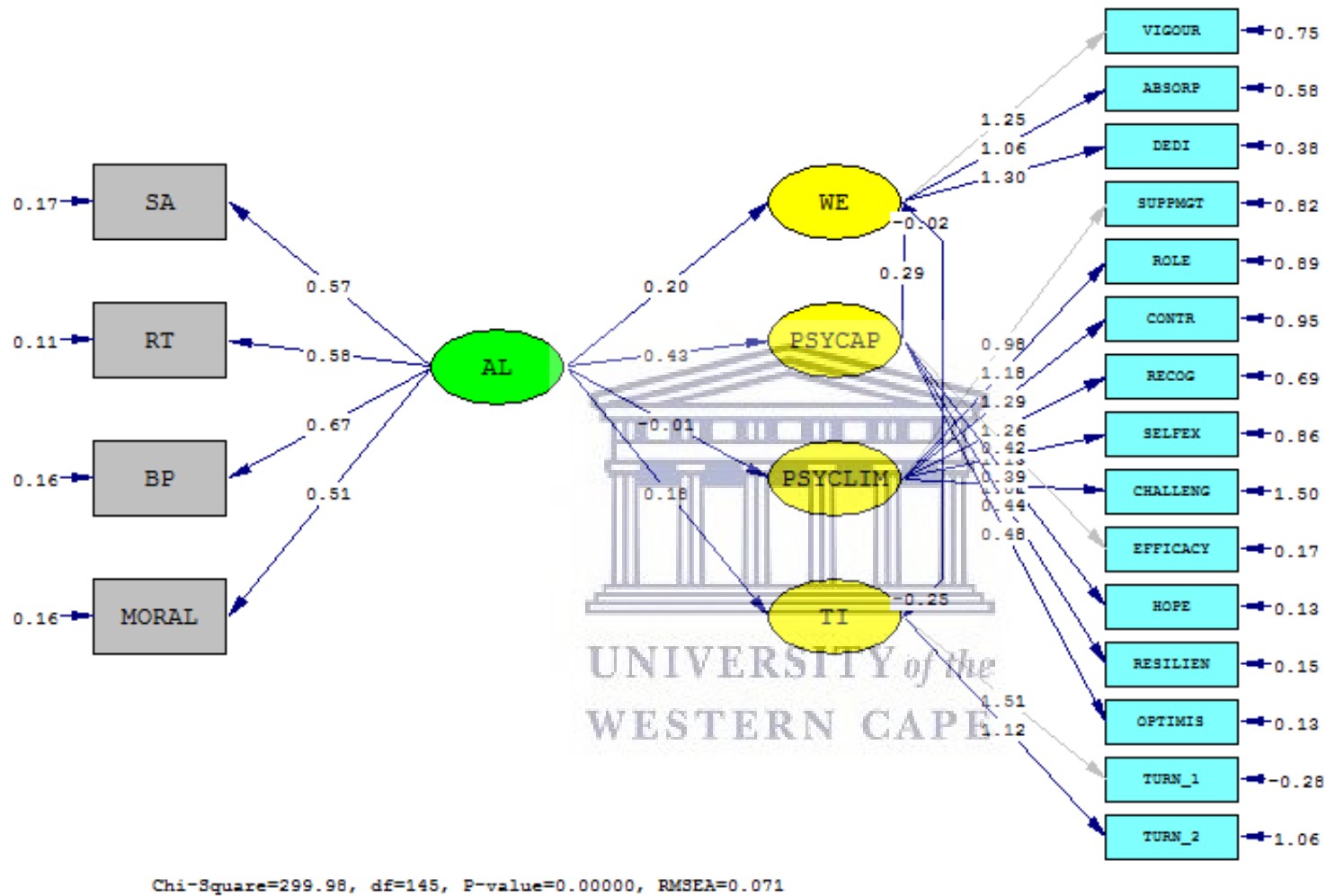



Figure 4.9: The fitted structural model

TABLE 4.47

The Beta and Gamma Matrices

| BETA | | | |
|--------------|-------------------|-------------------|------------------|
| | WENGAGE | PSYCLIMA | PSYCAP |
| WENGAGE | - - | -0.012 (0.064) | 0.288 (0.099) |
| PSYCLIMA | - - | -0.191 | 2.921 |
| PSYCAP | - - | - - | - - |
| TURNOVER | -0.152 (0.068) | - - | - - |
| | -2.240 | | |
| GAMMA | | | |
| | AUTHENT | | |
| WENGAGE | 0.199 (0.087) | | |
| PSYCLIMA | -0.010 (0.085) | | |
| PSYCAP | 0.430 (0.096) | | |
| | 2.276 | | |
| | -0.113 | | |
| | 4.459 | | |



4.7.1 The beta and the gamma matrices

The gamma matrix (γ) evaluates the significance, strength and directional relationships between the exogenous latent variables (ξ) and the endogenous latent variables (η) whilst the beta matrix (β) assesses the significance of the relationships between the endogenous variables. The beta and gamma indices portray the fixed paths that may statistically significantly ($p < .01$) boost the fit of the comprehensive model if freed. “The theoretical meaningfulness of the proposed paths are critical in considering the possibility of freeing currently fixed parameters” (Mahembe, 2014). The values

calculated for beta and gamma are depicted in Table 4.47. Various gamma and beta relationships have been hypothesized and tested in this study. These hypotheses are briefly discussed in this section.

Hypothesis 1: Authentic leadership behaviours positively affect work engagement.

The t-value of the link between authentic leadership and work engagement is greater than 1.65. This indicates that there is a significant positive relationship between the two latent variables. The proposed relationship between authentic leadership and work engagement was therefore supported.

Hypothesis 2: Psychological capital positively affects work engagement.

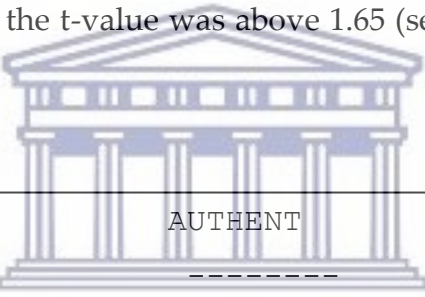
The relationship between psychological Capital (η_1) and work engagement (η_3) was supported as the t-value of the link between the two variables is greater than 1.65. This indicates that there is a positive significant relationship between psychological Capital (η_1) and work engagement (η_3). Therefore hypothesis 2 is supported.

Hypothesis 3: Psychological climate positively affects work engagement.

The t-value of the link between psychological Climate (η_2) and work engagement (η_3) is less than 1.65. This indicates that the proposed relationship between psychological Climate (η_2) and work engagement (η_3) is not significant. Hypothesis 3 is therefore not supported.

Hypothesis 4: Psychological Capital mediates the relationship between authentic leadership and work engagement

According to Hoyle and Kenny (1999), an indirect or mediating effect assesses the impact of one variable on another as that variable's influence works through one or more intervening variables. It is the effect of an independent variable on a dependent variable through one or more intervening or mediating variables. This hypothesis was the only mediating hypotheses of the two postulated in the study that met the assumption that there should be a relationship between the bi-variate variables for a mediating effect to occur. The indirect effects derived from the LISREL output for this hypothesis was significant as the t-value was above 1.65 (see below). Hypothesis 4 was therefore corroborated.



| | | |
|---------|--------------|--|
| | AUTHENT | |
| WENGAGE | 0.124 | |
| | (0.047) | |
| | 2.665 | |

Hypothesis 5: Psychological climate mediates the relationship between authentic leadership and work engagement

One of the important assumptions for a mediating relationship is that the variables should be correlated. In this study the mediating effect of psychological climate on the relationship between authentic leadership and work engagement failed to meet this

important assumption although a relationship exists between authentic leadership and psychological climate (see Table 4.48). This hypothesis was therefore not corroborated in this study.

Table 4.48

Relationships among the Variables used in the Study

| | | Correlations | | | | |
|---------|---------------------|---------------------|---------|---------|--------|--------|
| | | TUWES | TPSYCLI | TPSYCAP | TINT | TAUTH |
| TUWES | Pearson Correlation | 1 | .048 | .352** | -.108 | .318** |
| | Sig. (2-tailed) | | .489 | .000 | .117 | .000 |
| | N | 212 | 212 | 212 | 212 | 212 |
| TPSYCLI | Pearson Correlation | .048 | 1 | -.136* | .185** | .059 |
| | Sig. (2-tailed) | .489 | | .048 | .007 | .395 |
| | N | 212 | 212 | 212 | 212 | 212 |
| TPSYCAP | Pearson Correlation | .352** | -.136* | 1 | .157* | .471** |
| | Sig. (2-tailed) | .000 | .048 | | .022 | .000 |
| | N | 212 | 212 | 212 | 212 | 212 |
| TINT | Pearson Correlation | -.108 | .185** | .157* | 1 | .128 |
| | Sig. (2-tailed) | .117 | .007 | .022 | | .063 |
| | N | 212 | 212 | 212 | 212 | 212 |
| TAUTH | Pearson Correlation | .318** | .059 | .471** | .128 | 1 |
| | Sig. (2-tailed) | .000 | .395 | .000 | .063 | |
| | N | 212 | 212 | 212 | 212 | 212 |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Hypothesis 6: Turnover Intention negatively relates to work engagement.

The relationship between *Turnover Intention* (η_4) and *Work engagement* (η_3) was supported as the t-value of the link between the two variables is more than -1.65. This

indicates that there is a negative relationship between *Turnover Intention* (η_4) and *Work engagement* (η_3). Hypothesis 6 is thus accepted

Hypothesis 7: Turnover Intention negatively moderates the relationship between authentic leadership and work engagement.

The moderating effect of turnover intention on the relationship between authentic leadership and work engagement was performed with regression analysis using the product term between authentic leadership and turnover intention to represent the interaction effect. The assumptions of regression analysis that includes a test for correlations were tested (Table 4.48). The only correlation in this equation/model was found between authentic leadership and work engagement. The output from the regression model indicated that the moderating effect was not significant. The ANOVA table (Table 4.49) indicated that the model in which the dependent variable is work engagement and the independent variable is the product term of authentic leadership and turnover intention failed to reach significance, as the significance value is above 0.05. This is corroborated by the coefficients table which indicates a value above .05 for the significance. Therefore hypothesis 7 was not supported.

Table 4.49

ANOVA and Coefficients

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|------|-------------------|
| 1 | Regression | 19.531 | 1 | 19.531 | .182 | .670 ^b |
| | Residual | 22522.657 | 210 | 107.251 | | |
| | Total | 22542.189 | 211 | | | |

a. Dependent Variable: TUWES

b. Predictors: (Constant), ALTI



Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | Correlations | | | Collinearity Statistics | | |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|--------------|---------|------|-------------------------|-------|--|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF | |
| 1 | (Constant) | 33.603 | 1.827 | | 18.396 | .000 | | | | | | |
| | ALTI | .001 | .002 | .029 | .427 | .670 | .029 | .029 | .029 | 1.000 | 1.000 | |

a. Dependent Variable: TUWES

4.8 CONCLUSION

This chapter presented the findings obtained from the statistical analyses conducted with SPSS (version 24) and LISREL (version 8.80). The chapter also considered the psychometric properties of the measuring instruments used for the study with the item and dimensional analyses utilized to determine and eliminate poor items. The structural model fit indices and overall measurement was identified and their implications discussed. The discussion of the study findings is presented in the subsequent and final chapter.



UNIVERSITY *of the*
WESTERN CAPE

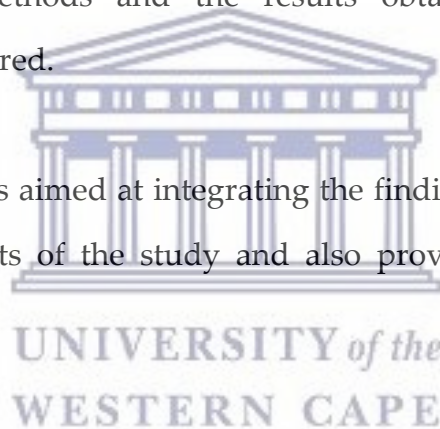
CHAPTER 5

INTEGRATION OF FINDINGS, DISCUSSION OF RESEARCH RESULTS, CONCLUSIONS AND RECOMMENDATIONS

5.1 PREAMBLE

The focal points of the preceding chapters were based on highlighting and expatiating on the research problem and propositions, the systematic reviews of the extant literature on the understudied constructs – (authentic leadership, psychological capital, psychological climate, turnover intention and employee engagement), the data collection and analysis methods and the results obtained from the measuring instruments being administered.

Consequently, this chapter is aimed at integrating the findings of the study, explaining and summarizing the results of the study and also providing the way forward for further research work.



5.2 INTRODUCTION

This chapter will comprise of a discussion of the most salient results of the study with regard to the relevant literature presented in earlier chapters. This discussion will include a summary of the main findings and conclusions that can be drawn based on the results of the data analyses. Furthermore the limitations of the present study will be discussed and followed by the implications for existing theory. The chapter will be concluded with recommendations for implementation and future research. This current study developed and tested a model that examined the relationships between authentic leadership, psychological capital, psychological climate, turnover intention and work engagement of employees. This hypothesized model assisted the researcher in

determining the kind of relationships that exist between the understudied constructs and the direction of such relationships. To achieve this objective, the study utilized two data sources: primary and secondary data collection method through (i) systematic literature reviews and (ii) cross-sectional quantitative data. Both results were presented in chapters 2 and 4. It is anticipated that the information obtained from this research will significantly, constructively add value to theoretical and practical knowledge on how to enhance employee engagement within the workplace. This is imperative because the findings of this study although cross-sectional in nature, gives quite an hopeful, helpful and directional conclusion on the antecedents of employee engagement within the Nigerian context and hopefully in the African environment.

Specifically, in Chapter 1, the research problem, questions, objectives and hypothesis for this study were set out. Chapter 2 was a review of the relevant literature associated with the study. Three reviews were carried out to expatiate on the constructs under study whilst one traditional literature review was conducted. Chapter 3 described the research designs utilized for the study and gave explanations on the methodologies employed to test the hypotheses that had been proposed. In Chapter 4, the overarching substantive research hypotheses with their ensuing path specific substantive research hypotheses were tested using structural equation modeling (SEM). The results obtained from the study and the statistical analyses were used to obtain understandable results and these were presented. These results proffered answers to the proposed research problem and questions of the study and allowed the researcher to reach understandable conclusions that would be of practical significance.

In this chapter, the research objectives are discussed in-tandem with the hypotheses presented at the onset of the study. These objectives were:

1. To undertake an empirical investigation to test the proposed theoretical model of the relationships among the variables under investigation through the administration of a composite questionnaire.
 - a. To determine whether PsyCap mediates the relationship between authentic leadership and work engagement.
 - b. To determine whether psychological climate mediates the relationship between authentic leadership and work engagement.
 - c. To ascertain the relationship between intention to quit and work engagement.
 - d. To ascertain the moderating effect of intention to quit on the relationship between authentic leadership and work engagement.
2. To systematically review previous research examining the relationship between authentic leadership, psychological capital, psychological climate and work engagement of employees.
 - a. To systematically review previous studies examining the relationship between authentic leadership and work engagement of employees.
 - b. To systematically review studies that examined the relationship between psychological capital and employee engagement.
 - c. To systematically review the relationship between psychological climate and work engagement of employees based on previous studies.

The results presented in Chapter 2 and 4 are now put up for discussion in the present chapter as it integrates all the findings of this study based on the highlighted objectives and gives the summary, recommendation and practical implication of the results obtained in this study. This chapter also carefully itemizes that the limitations encountered in this study and concludes with suggestions for future research.

5.3 SYNOPSIS OF RESEARCH FINDINGS

5.3.1 Portability of the measuring instruments

Discussed below are the measuring instruments used for the present study and their portability to the sample.

5.3.1.1 *Authentic Leadership Inventory*

In this study, the authentic leadership scale (ALI) developed by Neider and Schriesheim (2011) was used to assess authentic leadership. The scale was developed in United States of America. The scale is considered portable for a Nigerian sample and possibly for an African setting.

The four-dimensional structure of the ALI was utilized in the banking sector. The internal reliability of the four factor structure of the ALI was considered acceptable but poor for the banking industry in the Nigerian sample. Although the Cronbach Alpha of 0.674 was obtained for the scale, it was deemed relatively reliable. A South African study by Coxen, Van der Vaart and Stander (2016) also confirmed the reliability of the ALI, although it was specified as a one-factor structure with 9 items instead of a four-factor structure. The one-factor structure of the ALI had been previously supported by two other South African studies (Maximo, 2015; Stander et al., 2015).

It is crucial to note that the findings from this study further emphasize the need for the factor structure of instruments that were developed in Western Countries to be ascertained before they are administered in Africa (Van Der Vaart et al., 2016).

5.3.1.2 *Psychological Capital Questionnaire*

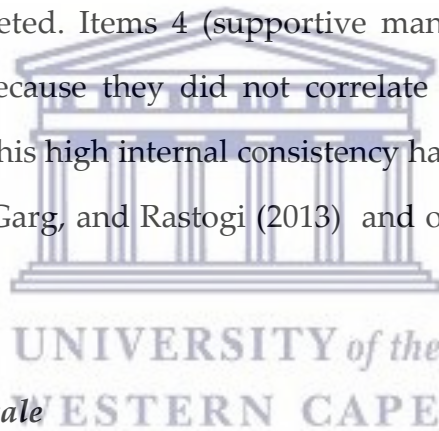
The PCQ was used in this study to assess the psychological capital of employees. The psychological capital scale (PCQ-24) was developed by Luthans, Youssef and Avolio (2007) in the United States. This scale demonstrates internal reliability and is deemed portable for a Nigerian environment.

The PCQ measured the four dimensions of the PsyCap on respondents that work in the banking sector. The internal reliability obtained for the PCQ for this study is 0.758 which is considered acceptable although the Optimism sub-scale fell below the accepted level (0.625). This assumes that the four-factor dimensions (Self-efficacy, hope, resilience, and optimism) of the PCQ as was originally indicated by Luthans et al. (2007) was also obtained for this sample. This is consistent with South African studies (Görgens-Ekermans & Herbert, 2013; Simons & Buitendach, 2013). Although few international and African studies, Avey, Luthans and Youssef (2010); Görgens-Ekermans and Herbert (2013); Harris (2012); Luthans, Avolio, Avey and Norman (2007) have pointed out that the reliability coefficient for the resilience and optimism were low, it could be assumed that the low reliability coefficients of optimism and resilience may be as a result of the reverse-scored items in the scale (Items 13 – resilience, 20 and 23 - Optimism). Reverse-scored items have been previously noted to have negative influences on the reliability of a scale, particularly as regards the correct interpretation of the question, statement or phrase used in the reverse item (Du Plessis, 2014; Marsh, 1996; Schmitt & Stults, 1985; Woods, 2006). This stands to reason again that researchers must ensure that the psychometric properties of instruments administered in a cultural or language setting different from which they had been developed such as the PCQ must be previously piloted or the wording changed so as to ensure their suitability for the current sample.

5.3.1.3 *Psychological Climate Questionnaire*

The psychological climate questionnaire by Brown and Leigh (1996) was used to measure the psychological climate construct in this study. This measure was developed in the United States to assess the psychological climate of individuals at the workplace. It demonstrates internal reliability and has been considered portable for the Nigerian environment and possible the African setting.

The PsyClim was assessed with the six-dimension PCQ that has 21 items. The internal reliability coefficient obtained for the PCQ for this study is 0.867 which is considered acceptable (Nunnally, 1967; Pallant, 2016). This score was, however, achieved after two items in the scale were deleted. Items 4 (supportive management) and item 8 (Self-expression) were deleted because they did not correlate well with the overall scale (Everitt, 2006; Field, 2009). This high internal consistency had been previously validated by an India study, Kataria, Garg, and Rastogi (2013) and other western studies (Shuck & Jr, 2014).



5.3.1.4 *Turnover Intention Scale*

Intention to quit was assessed by the Turnover Intention Scale by Samuel (2017). This scale was developed in South Africa. This scale demonstrated a good internal reliability and verified as portable for a Nigerian environment and possibly for the entire African culture.

The scale is a 6-item scale that is scored on a 6-point frequency rating scale ranging from 1 – Disagree strongly to 6 – Agree strongly. The internal reliability coefficient obtained for the TI for this study is .862 which is considered acceptable (Nunnally, 1967; Pallant,

2016). However, to date, no other study has reported on the psychometric properties and factor structure of the scale.

One of the unique contributions of this study is the validation of the TI scale by Samuel (2017). Findings in this study prove the reliability of the TI scale with internal reliability coefficient of $\alpha = .862$. This value is considered adequate. The uni-dimensionality and factorisability of the Turnover Intention scale was also proven with the KMO index and the Bartlett's test of sphericity value of .843 and 545.919 ($df = 15$; $p=0.000$) respectively. This is deemed satisfactory. However, the CFA carried out indicates a RMSEA value of .098 which depicts that the goodness-of-fit indices of the TI scale did not achieve a good model fit. As such, one of the items, int2 was deleted. After the deletion, the goodness-of-fit indices improved and showed that a reasonable model fit was achieved. An RMSEA value of .059 was obtained. The TI scale in its current form with 5 items is therefore deemed possibly portable for the African sample.

5.3.1.5 *Utrecht Work Engagement Scale*

Work Engagement was measured with the Utrecht Work Engagement Scale (UWES-17) which was developed by Schaufeli, Salanova, Gonzales-Roma and Bakker (2002). The work engagement instrument (UWES-17) was developed in the Netherlands, but has been subsequently validated in quite a number of other studies and in different countries. This scale is deemed partially portable for a Nigerian sample.

The work engagement measuring scale, the UWES-17 which was defined and conceptualized as a three-dimensional construct by (Schaufeli et al., 2002) was used to assess the work engagement construct. In this study, the internal consistency obtained was .839 although item 13 was deleted to get this reliability coefficient. Although the

three-dimensional factor structure had been previously confirmed in several countries (Alok & Israel, 2012; Karatepe & Karadas, 2015; Şahin et al., 2014; Wang & Hsieh, 2013), as well as in South Africa (Bell & Barkhuizen, 2011; Rothmann & Jordaan, 2006; Simons & Buitendach, 2013), in this present study, some dimensional issues were raised regarding the UWES such that the three-factor structure was discarded and a one-dimensional factor was utilized. This finding is consistent with previous South African studies (Beukes & Botha, 2013; De Bruin, Hill, Henn, & Muller, 2013; Du Plessis, 2014).

These results further substantiate the necessity of determining the determining the portability of instruments especially within an African, culturally diverse environment.

5.4 ASSESSMENT OF MODEL HYPOTHESES

Hypothesis 1

| | | |
|--------------|--|-----------|
| Hypothesis 1 | Authentic leadership behaviours positively affects work engagement | Supported |
|--------------|--|-----------|

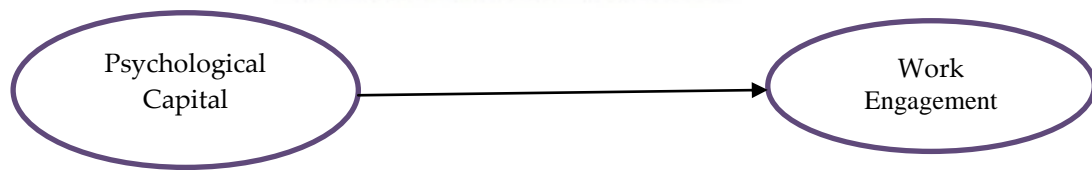


In order to determine whether a hypothesis is significant or not, t-values are used. The magnitude of the t-values depends of the level of confidence and whether the hypothesis is two-tailed or one-tailed. In this study, the hypotheses are one-tailed and are at the 95% level of confidence, therefore the cut-off for the t-values is +/- 1.65. The t-value of the link between Authentic leadership and work engagement is greater than 1.65 (see Table 4.47). This indicates that there is a significant positive relationship between the two latent variables. The proposed relationship between authentic

leadership and work engagement was therefore supported. When employees perceive that their leader is authentic in nature, they are likely to be more engaged at their work. Hypothesis 1 is thus accepted. The association of *Authentic leadership* (ξ_1) and *Work engagement* (η_3) is consistent with previous findings by (Alok & Israel, 2012; Hassan & Ahmed, 2011). Alok and Israel (2012) conducted a study among working professionals in India and reported positive correlations between authentic leadership and work engagement. Hassan and Ahmed (2011) reported similar findings among bank employees in Malaysia. The psychological explanation behind the influence of authentic leadership and work engagement could be that authentic leaders develop feelings of trust through relational transparency and self-awareness which is likely to be perceived in positive light by the employees thereby encouraging employees' work engagement as a payback to their leader.

Hypothesis 2

| | | |
|--------------|--|-----------|
| Hypothesis 2 | Psychological capital positively affects work engagement | Supported |
|--------------|--|-----------|



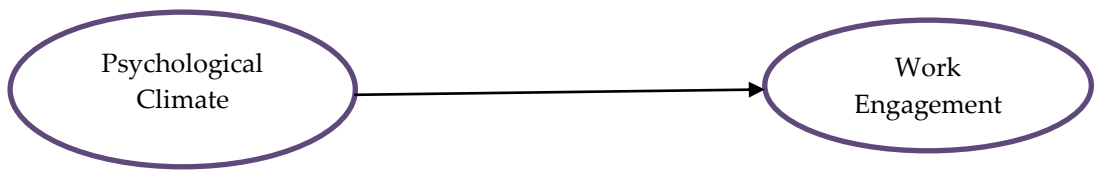
The relationship between *Psychological Capital* (η_1) and *Work engagement* (η_3) was supported as the t-value of the link between the two variables is greater than 1.65. This hypothesis is one-tailed and so is at the 95% level of confidence, therefore the cut-off for the t-values is +/- 1.65. This indicates that there is a positive significant relationship between *Psychological Capital* (η_1) and *Work engagement* (η_3). Therefore hypothesis 2 is

supported. The association of *Psychological Capital* (η_1) and *Work engagement* (η_3) is consistent with previous findings (Chaurasia & Shukla, 2014; Simons & Buitendach, 2013). Contemporary research has also shifted its focus from dealing with the negative aspects of work to concentrating also on positive aspects which can be developed. Psychological capital is one of the constructs that fall under the domain of positive psychology in which the elements of hope, resilience (ability to bounce back after drawbacks), optimism and self-efficacy are personal attributes that an individual can only engage in when they are engaged. It is highly improbable that an individual will be resilient when they are not engaged or lacks the conviction to succeed in a task. The psychological capital research on personal and work related factors have been studied as antecedents for employee engagement. The support for this finding in this study is therefore consistent with contemporary research findings (Simons & Buitendach, 2013). When employees exhibit Self-efficacy, hope, optimism and resilience, they are likely to be more engaged at their work. Hypothesis 2 is thus accepted.

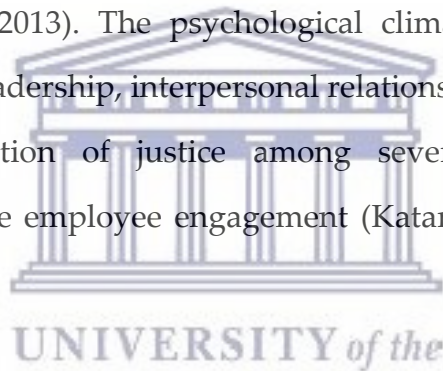


Hypothesis 3:

| | | |
|--------------|--|---------------|
| Hypothesis 3 | Psychological climate positively affects work engagement | Not supported |
|--------------|--|---------------|



The t-value of the link between *Psychological Climate* (η_2) and *Work engagement* (η_3) is less than 1.65. This indicates that the proposed relationship between *Psychological Climate* (η_2) and *Work engagement* (η_3) is not significant. Hypothesis 3 is therefore not supported. The association of *Psychological Climate* (η_2) and *Work engagement* (η_3) is not consistent with previous findings by Kataria et al. (2013a); Shuck and Jr (2014). The existence of a positive organization climate creates a conducive environment for employees to thrive and engage in behaviours that foster work engagement and organizational effectiveness. As the external environment for most organizations is becoming extremely competitive, organizations are challenged to recruit and retain their human resources and this entails creating ethical and friendly organization climates for the employees (Kataria et al., 2013). The psychological climate incorporates numerous aspects such the nature of leadership, interpersonal relationships, trust in the leader and among employees, perception of justice among several issues which have a psychological bearing on the employee engagement (Kataria et al. (2013a; Shuck & Jr (2014).

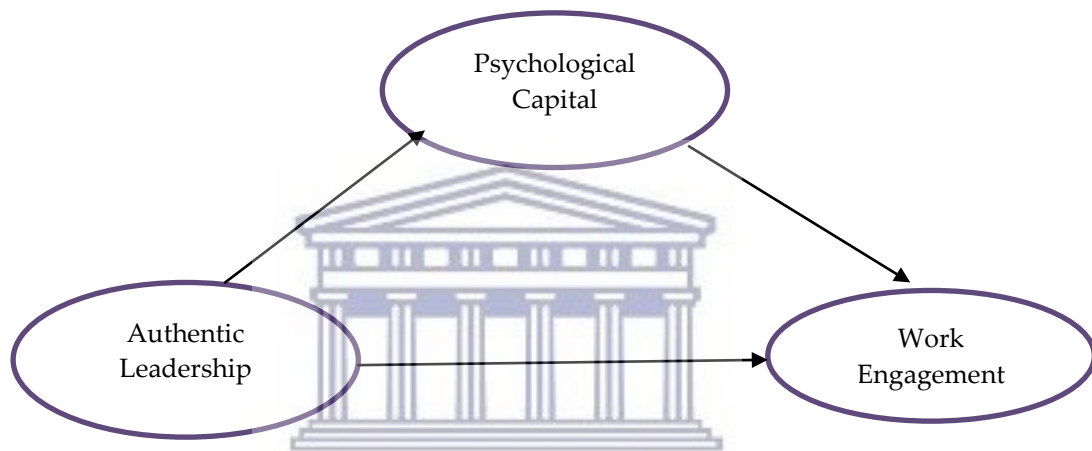


The findings of study is therefore inconsistent with previous findings. The reason for this could be as a result of shortage of jobs in the country. When employees think that jobs are scarce, they would want to do all it takes to hold on to their jobs. Employees would be engaged at work and disregard any negative perception they may have towards the organization or the management. Furthermore, one of the systematic reviews earlier conducted in this study, Volpone et al. (2012) indicated that although favourable psychological climate perceptions produced higher levels of engagement, the relationship was however particularly significant for the Black and Hispanic population than for the White employees. This study may assume then that

psychological climate may be significant in a relative way for different cultures or geographical groups. A comparative study of this construct is therefore encouraged.

Hypothesis 4:

| | | |
|--------------|--|-----------|
| Hypothesis 4 | Psychological Capital mediates the relationship between authentic leadership and work engagement | Supported |
|--------------|--|-----------|



The mediating effect of *Psychological Capital* (η_1) on the relationship between *Authentic leadership* (ξ_1) and *Work engagement* (η_3) was supported. The t-value of the link of this relationship ($t = 2.67$) is greater than 1.65. This implies that there is a positive significant mediating relationship between *Psychological Capital* (η_1), the relationship between *Authentic leadership* (ξ_1) and *Work engagement* (η_3). Therefore $H_{04}: \gamma_{11}\beta_{31} = 0$ is rejected. Therefore, the proposed relationship between these three latent variables is supported. It is therefore evident that *Psychological Capital* (η_1) is a significant mediator of the relationship between *Authentic leadership* (ξ_1) and *Work engagement* (η_3). Hypothesis 4 is thus accepted. This finding is acceptable as one can infer that the authentic leader by virtue of exercising a high degree of authenticity coupled with personal staff development via coaching, employees are naturally motivated to develop some positive

attitude towards their work thereby increasing work engagement. The psychological capital in this case helps to augment the leader's efforts to equip them with the required skills needed to facilitate work engagement. Psychological capital will enhance the authenticity of leaders, make them more engaged at work and in leading their teams which subsequently, will inculcate into the employees the same mind to work. Furthermore, studies from the systematic review earlier conducted, Chaurasia and Shukla (2014); Chen (2015); Larson et al. (2013), indicated a significant positive relationship between leaders' PsyCap and engagement through the mediation of followers' PsyCap. It can be assumed therefore that when employees who are characterized with positive attributes such as hope, optimism, resilience and self efficacy, are led by authentic leaders, they will be better engaged at work.

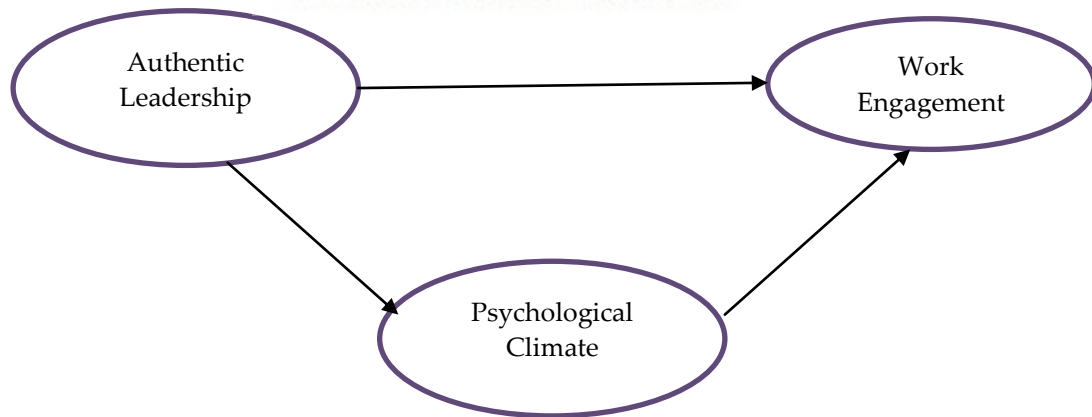
Hypothesis 5:

Hypothesis 5

Psychological climate mediates the relationship between authentic leadership and work engagement

Not supported

UNIVERSITY of the
WESTERN CAPE

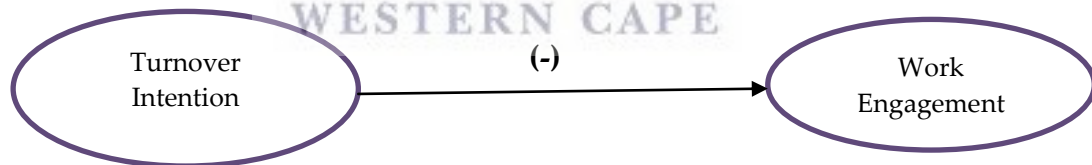


One of the important assumptions for a mediating relationship is that the variables should be correlated. In this study the mediating effect of psychological climate on the

relationship between authentic leadership and work engagement failed to meet this important assumption although a relationship exists between authentic leadership and psychological climate (see Table 4.48). This hypothesis was therefore not corroborated in this study. The researcher is of the opinion that individual employee perceptions of work environment (psychological climate) may sometimes be overpowered by corporate perceptions (organizational perceptions) such that employees appear not to have a mind of their own but view the work environment through the lens of the collective mindset. This subjective mindset could either be positively or negatively oriented. The fear of reprisals or dismissals may bring about a negative perception such that employees are engaged, however, motivated through a negative mindset. It is suggested that further studies be conducted regarding this.

Hypothesis 6:

| | | |
|--------------|--|-----------|
| Hypothesis 6 | Turnover Intention negatively relates to work engagement | Supported |
|--------------|--|-----------|

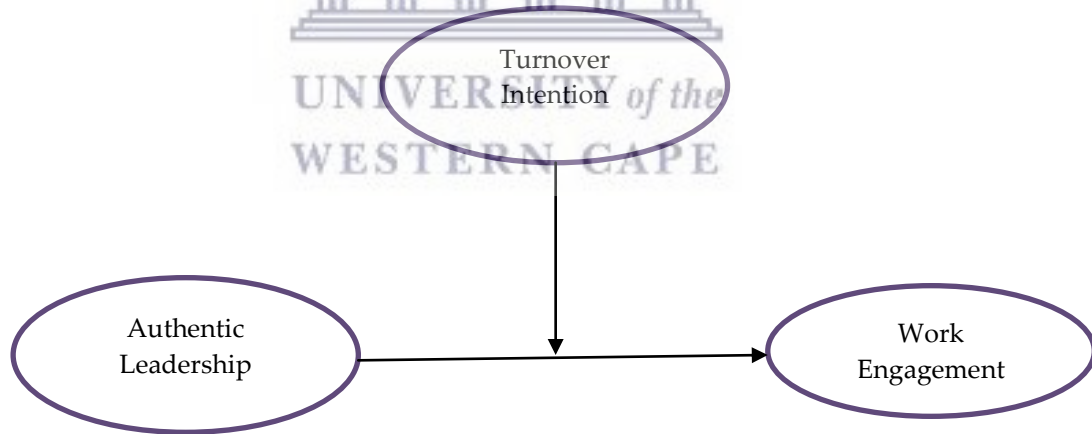


The relationship between *Turnover Intention* (η_4) and *Work engagement* (η_3) was verified as the t-value of the link between the two variables is more than -1.65 (see Table 4.47). This indicates that there is a negative relationship between *Turnover Intention* (η_4) and *Work engagement* (η_3). Therefore $H_{06}: \beta_{34} = 0$ is accepted which suggests that the proposed relationship between these two latent variables is supported. Hypothesis 6 is thus accepted. This implies that as the employees who participated in this study become engaged their turnover intention decreases. This finding is consistent with the results

reported by Van Der Westhuizen, (2014) on the sample of employees employed by audit firms operating in the South African FSI. Gupta and Shaheen, (2017) also reported similar findings on a sample of 228 employees working in diverse industries in India. The finding implies that there is an inverse relationship between turnover intention and work engagement – as work engagement increases turnover intention decreases. This is because, employees that are engaged will be so engrossed with their work with ideas of making their job roles better and being more productive as most paramount on their minds rather than quitting desires.

Hypothesis 7:

| | | |
|--------------|---|---------------|
| Hypothesis 7 | Turnover Intention negatively moderates the relationship between authentic leadership and work engagement | Not supported |
|--------------|---|---------------|



The moderating effect of turnover intention on the relationship between authentic leadership and work engagement was performed with regression analysis using the product term between authentic leadership and turnover intention to represent the interaction effect. The assumptions of regression analysis that includes a test for correlations were tested (see Table 4.48). The only correlation in this equation/model

was found between authentic leadership and work engagement. The output from the regression model indicated that the moderating effect was not significant. The ANOVA table indicated that the model in which the dependent variable is work engagement and the independent variable is the product term of authentic leadership and turnover intention failed to reach significance, as the significance value is above 0.05. This is corroborated by the coefficients table which indicates a value above .05 for the significance. Therefore hypothesis 7 was not supported. This finding is in tandem with the result for a direct effect between authentic leadership and work engagement.

5.5 PRACTICAL IMPLICATIONS OF THE STUDY

These study results portray significant, positive relationships between authentic leadership, psychological capital and employee engagement whilst a weak relationship exists between psychological climate and employee engagement. Accordingly, a significant negative relationship is indicated between turnover intention and employee engagement.

The main contributions of the present study relates to the effect of authentic leadership behaviours on employee engagement. Organizations must develop interventions that propel its leaders to be authentic in nature and subsequently influence work engagement. According to the findings, work engagement has an inverse relationship with turnover intention, therefore, interventions that are geared towards training leaders to be authentic would produce favourable outcomes such as improved work engagement and ultimately reduced turnover. These outcomes largely save money for the organization in diverse ways especially with regards to recruitment costs.

Secondly, the findings of the study importantly emphasize the crucial role that the constructs of Authentic Leadership namely, self-awareness, relational transparency, balanced processing and internalized moral perspective play on PsyCap by developing the dimensions of PsyCap namely, self-efficacy, hope, optimism and resilience. These constructs are very useful for the outward display and cultivation of work engagement at the workplace. When organizations seek to develop self-awareness, relational transparency, balanced processing and internalized moral perspective in leaders, positive organizational behaviours (POB), strengths and positive psychological capacities such as resilience and optimism is integrated into the core nature of an organization which inherently boosts and ensures engaged workers. It is essential to note that POB are positive attributes that are malleable, open to change and development (Luthans, 2002; Youssef & Luthans, 2007). Therefore, these attributes can be developed among employees so as to ensure a positive disposition towards work. Employees with an enhanced PsyCap are likely to perform well even during times when the organization experiences harsh circumstances from the external or national pressures such as a national economic recession. Furthermore, when PsyCap is initiated, the desire to quit the organization is reduced. These interventions not only reduce turnover intention but it subsequently minimizes the cost of dismissals and recruiting. It is essential that employee engagement is earnestly cultivated and promoted by organizations so as to reduce turnover intention.

This study has also validated the TI scale. The reliability, uni-dimensionality and factorisability of the scale has been ascertained. It is advised that TI researchers should use the 5-item TI scale rather than the 6-item scale because of the CFA carried out in this study only indicated a reasonable model fit with the 5-item scale.

5.6 LIMITATIONS OF THE STUDY

It is noteworthy to refer specifically to the limitations encountered in this study, although some of the shortcomings or limitations of this study had been previously highlighted in previous chapters.

First, the use of Convenience sampling technique which is a type of non-probability research design has implications on the generalizability of the study findings. The sample used consisted of only bank employees in Nigeria. Furthermore, most of the respondents were drawn from the western part of the country which consists of about 5 states. This sample therefore may be a bit skewed with the country composed of 36 states with more than 250 ethnic groups. Although, the sample was drawn from banks in Ibadan and Lagos which to a large extent has employees that represent a heterogeneous sample, however, it would have been more generalizable to test the model from a more heterogeneous sample that is representative of the multicultural society of the country's population of employees. Consequently, the structural model was tested on a non-probability sample as this sampling technique apparently indicates that the study sample did not effectively represent the target population.

Secondly, the study set out to make a comparative analysis between the sample from a Nigerian sample and a South African sample as the results of such would have provided a much more generalizable picture of the results. However, the researcher was only able to collect 40 participants from the South African sample. This figure is too small to give an adequate basis of comparison with the Nigerian sample. Additionally, a larger sample size would provide the advantage of boosting the statistical power of the study. Replicating this study on other samples especially in Africa in varied organizations is therefore encouraged.

Third, the measuring instruments used in this study acts as another form of limitation. Since the instruments used are self-report, closed ended instruments, it is unclear whether the reported results actually indicate the real state of mind or actual experiences of the respondents. It could be that the respondents' viewpoints may differ from the options available in the self-reported instruments. Furthermore, these instruments could also bring about the possibility of social desirability. Social desirability has been referred to as the attempt that could be made by respondents (deliberately or in deliberately), to manipulate answers by proffering more positive or satisfactory answers when completing such instrument or even exaggerate the situations being examined for the purpose of sympathy. Elmes, Kantowitz, and Roediger III (2011) cautions that this attitude by participants may negatively impact on the information supplied by respondents thus rating themselves higher or lower and subsequently tilting the information obtained from such results or study. This limitation is especially of great import in this type of study in which subordinates are expected to rate their leaders and probably submit their completed questionnaires to their leaders for onward submission to the researcher. These employees could be drawn into creating a more favourable impression to their bosses so as to gain some favour or acceptability. It is also crucial to note that some of the instruments used had not been extensively tested with an African sample therefore, it would be imperative that subsequent studies should seek to make sure that the psychometric properties of the instruments used are ascertained.

Fourth, a good model fit in SEM does not necessarily imply causality, although the structural model may theorize specific causal paths between the latent variables and the significant path coefficients. These paths signify inconclusive, insufficient proof to confirm or conclude that these causal hypotheses have been confirmed. It should be

noted that this snag is not really as a result of the technique used in the analysis but mainly because of the nature of the study (ex post facto). The nature of the study hinders relevant latent exogenous and endogenous variables to be experimentally manipulated (Kerlinger & Lee, 2000).

Fifth, collecting data at a single point in time aggravates same-source or common method biases. In other words it does not take care of maturational effects. According to Podsakoff and MacKenzie (1994) a longitudinal design could reduce this potential influence.

5.7 SUGGESTIONS FOR FUTURE RESEARCH

In this study, the relationships between authentic leadership, psychological capital, psychological climate, intention to quit and work engagement was systematically explored. The findings suggest that authentic leadership, psychological capital, psychological climate may not be sufficient to foster work engagement at the workplace

The portability of the measuring instruments for authentic leadership, psychological capital, psychological climate, turnover intention and work engagement was briefly considered. The results from the study suggest that it is important that further studies be carried out to verify all these instruments in the African diverse culture. Of utmost importance is the verification of the UWES, the Turnover Intention scale and the PsyCap instrument. The language of these instruments and the factor structure need to be reexamined in future studies.

It is also suggested that comparative studies regarding these understudied constructs be undertaken. It is important for comparative studies between different countries and

between different organizations be undertaken as these dimensions would shed more light on the practicality and generalizability of the relationships between the variables.

Furthermore, it is suggested that more systematic reviews be conducted in the field of industrial psychology. Indeed extant studies have pointed out the sparsity of systematic reviews and meta-analysis amongst industrial psychology researchers (Boland et al., 2017; Rojon et al., 2011). Systematic reviews give insight to areas of uncertainty and identifies domains where little or no relevant research has been conducted and where new studies are needed (Petticrew & Roberts, 2006). Additionally, systematic reviews are publishable studies. Systematic reviews therefore provide an advantage over the traditional literature review. It is essential therefore that this is considered for future research.

Further studies should be conducted to determine the relationship between psychological climate and work engagement and also on the mediating role of the psychological climate. The findings in this study contradict the findings obtained from previous studies conducted. It is suggested that further studies be conducted to validate this finding.

Finally, it is encouraged that longitudinal studies be conducted. This allows for causal relationships of the understudied constructs to be determined. As it was observed in one of the studies De Waal and Pienaar (2013), PsyCap did not have any significant effect on Work Engagement over a long period of time. It is essential that these constructs are verified as indeed being stable over an extended period of time. Therefore, further research should be conducted regarding this.

5.8 CONCLUSION

The main purpose of the study was to test a conceptual model explicating the relationships between authentic leadership, psychological capital, psychological climate, intention to quit and work engagement. The findings of the study indicate an auspicious future for organizations as it suggests significant relationships between authentic leadership and work engagement; authentic leadership and psychological capital; psychological capital and work engagement; a negative relationship between work engagement and turnover; with no significant relationships between authentic leadership and psychological climate; psychological climate and work engagement. Furthermore, the mediating effect of psychological capital on the relationship between authentic leadership and work engagement was supported whilst the mediating effect of psychological climate on the relationship between authentic leadership and work engagement was not supported. The moderating effect of turnover intention on the relationship between authentic leadership and work engagement was not supported. It is envisaged that the practical implications of the present study will greatly contribute to the development and improvement of employees at the workplace and indeed organizations as a whole.

REFERENCES

- Adil, A., & Kamal, A. (2016). Impact of psychological capital and authentic leadership on work engagement and job related affective well-being. *Pakistan Journal of Psychological Research*, 31(1), 1–21.
- Ahamed, F., Hassan, A., & Hashim, J. (2013). Authentic leadership, trust and employees work engagement: A comparative study of Islamic and conventional banks in Malaysia. *Journal for Global Business Advancement*, 6(2), 152–166. <https://doi.org/10.1504/JGBA.2013.053568>
- Albrecht, S. L. (2013). Work engagement and the positive power of meaningful work. *Advances in Positive Organizational Psychology*, 1(2013), 237–260. [https://doi.org/10.1108/S2046-410X\(2013\)0000001013](https://doi.org/10.1108/S2046-410X(2013)0000001013)
- Alessandri, G., Borgogni, L., Consiglio, C., & Mitidieri, G. (2015). Psychometric properties of the Italian version of the psychological capital questionnaire. *International Journal of Selection and Assessment*, 23(2), 149–159. <https://doi.org/10.1111/ijsa.12103>
- Alexander, J. a, Lichtenstein, R., Oh, H. J., & Ullman, E. (1998). A causal model of voluntary turnover among nursing personnel in long-term psychiatric settings. *Research in Nursing & Health*, 21(5), 415–427.
- Alfes, K., Shantz, A. D., Truss, C., & Soane, E. C. (2013). The link between perceived human resource management practices, engagement and employee behaviour: a moderated mediation model. *The International Journal of Human Resource Management*, 24(2), 330–351. <https://doi.org/10.1080/09585192.2012.679950>
- Algera, P. M., & Lips-Wiersma, M. (2012). Radical authentic leadership: Co-creating the conditions under which all members of the organization can be authentic. *Leadership Quarterly*, 23(1), 118–131. <https://doi.org/10.1016/j.leaqua.2011.11.010>

- Ali, R., & Ahmed, M. S. (2009). The impact of reward and recognition programs on employee's motivation and satisfaction: an empirical study. *International Review of Business Research Papers*, 5(4), 270–279. <https://doi.org/10.5539/ijbm.v5n2P159>
- Alok, K. (2014). Authentic leadership and psychological ownership: investigation of interrelations. *Leadership & Organization Development Journal*, 35(4), 266–285. <https://doi.org/10.1108/LODJ-06-2012-0080>
- Alok, K., & Israel, D. (2012). Authentic leadership & work engagement. *Indian Journal of Industrial Relations*, 47(3), 498–510.
- Andrew, O. C., & Sofian, S. (2011). Engaging people who drive execution and organizational performance, 3(3), 569–575.
- Antino, M., Gil-Rodríguez, F., Rodríguez-Muñoz, A., & Borzillo, S. (2014). Evaluating positive leadership: pilot study on the psychometric properties of a reduced version of the Positive Leadership Assessment Scale. *Revista de Psicología Social*, 29(3), 589–608. <https://doi.org/10.1080/02134748.2014.972705>
- Aon Hewitt. (2012). 2012_Trends in global employee engagement, 1–30. Retrieved from http://www.aon.com/attachments/human-capital-consulting/2012_TrendsInGlobalEngagement_Final_v11.pdf
- Aon Hewitt. (2013). 2013 Trends in global employee engagement. *Aon Hewitt Consulting Performance, Reward & Talent*, 13(3), 1–32. <https://doi.org/10.1093/fampra/cms084>
- Aon Hewitt. (2014). 2014 Trends in global employee engagement, 1–50. Retrieved from <http://www.aon.com/attachments/human-capital-consulting/2014-trends-in-global-employee-engagement-report.pdf>
- Arakawa, D., & Greenberg, M. (2007). Optimistic managers and their influence on productivity and employee engagement in a technology organization: Implications for coaching psychologists. *International Coaching Psychology Review*, 2(1), 78–89. <https://doi.org/10.1007/978-90-481-8647-1>

- Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: A positive resource for combating employee stress and turnover. *Human Resource Management, 48*(5), 677–693. <https://doi.org/10.1002/hrm>
- Avey, J. B., Luthans, F., Smith, R. M., & Palmer, N. F. (2010). Impact of positive psychological capital on employee well-being over time. *Journal of Occupational Health Psychology, 15*(1), 17–28. <https://doi.org/10.1037/a0016998>
- Avey, J. B., Luthans, F., & Youssef, C. M. (2010). The additive value of positive psychological capital in predicting work attitudes and behaviours. *Journal of Management, 36*(2), 430–452. <https://doi.org/10.1177/0149206308329961>
- Avey, J. B., Nimnicht, J. L., & Graber Pigeon, N. (2010). Two field studies examining the association between positive psychological capital and employee performance. *Leadership & Organization Development Journal, 31*(5), 384–401.
- Avey, J. B., Patera, J. L., & West, B. J. (2006). The implications of positive psychological capital on employee absenteeism. *Journal of Leadership & Organizational Studies, 13*(2), 42–60. <https://doi.org/10.1177/10717919070130020401>
- Avey, J. B., Reichard, R. J., Luthans, F., & Mhatre, K. H. (2011). Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviours, and performance. *Human Resource Development Quarterly, 22*(2), 127–152. <https://doi.org/10.1002/hrdq.20070>
- Avey, J. B., Wernsing, T. S., & Luthans, F. (2008). Can positive employees help positive organizational change? Impact of psychological capital and emotions on relevant attitudes and behaviours. *The Journal of Applied Behavioural Science, 44*(1), 48–70. <https://doi.org/10.1177/0021886307311470>
- Avolio, B. J. (1999). *Full leadership development: Building the vital forces in organizations*. Sage.

- Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, 16(3), 315–338. <https://doi.org/10.1016/j.leaqua.2005.03.001>
- Avolio, B. J., Gardner, W. L., Walumbwa, F., Luthans, F., & May, D. R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviours. *Leadership Quarterly*, 15(6), 801–823. <https://doi.org/10.1016/j.leaqua.2004.09.003>
- Avolio, B. J., Gardner, W. L., & Walumbwa, F. O. (2007). Authentic leadership questionnaire.
- Avolio, B. J., & Mhatre, K. H. (2012). *Advances in theory and research on authentic leadership*. The Oxford handbook of positive organizational scholarship.
- Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: current theories, research, and future directions. *Annual Review of Psychology*, 60(1), 421–449. <https://doi.org/doi:10.1146/annurev.psych.60.110707.163621>
- Azoury, A., Daou, L., & Sleiaty, F. (2013). Employee engagement in family and non-family firms. *International Strategic Management Review*, 1(1–2), 11–29. <https://doi.org/10.1016/j.ism.2013.08.002>
- Babbie, E., & Mouton, J. (2001). *The practise of social research* (8th ed.). Oxford University Press. Retrieved from <https://www.oxford.co.za/book/9780195718546-practice-of-social-research#.WqiH3X-YOM8>
- Babbie E. (2016). *The practice of social research* (14th ed.). Nelson Education. Retrieved from www.worldcat.org/title/practice-of-social-research/oclc/899217794
- Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. *Journal of the Academy of Marketing Science*, 40(1), 8–34. <https://doi.org/10.1007/s11747-011-0278-x>

- Bakker, A. B. (2011). An evidence-based model of work engagement. *Current Directions in Psychological Science*, 20(4), 265–269. <https://doi.org/10.1177/0963721411414534>
- Bakker, A. B., Albrecht, S. L., & Leiter, M. P. (2011). Key questions regarding work engagement. *European Journal of Work and Organizational Psychology*, 20(1), 4–28. <https://doi.org/10.1080/1359432X.2010.485352>
- Bakker, A. B., & Bal, P. M. (2010). Weekly work engagement and performance: a study among starting teachers. *Journal of Occupational and Organizational Psychology*, 83, 189–206. <https://doi.org/10.1348/096317909X402596>
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management*, 43(1), 83–104. <https://doi.org/10.1002/hrm.84>
- Bakker, A. B., Gierveld, J. H., & Van Rijswijk, K. (2006). Success factors among female school principals in primary teaching: A study on burnout, work engagement, and performance. *Diemen the Netherlands: Right Management Consultants*.
- Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology*, 99(2), 274–284. <https://doi.org/10.1037/0022-0663.99.2.274>
- Bakker, A. B., & Leiter, M. P. (2010). Work Engagement: A handbook of essential theory and research. In *Work engagement : a handbook of essential theory and research* (pp. 1–20).
- Bakker, A. B., Rodríguez-Muñoz, A., & Derks, D. (2012). The emergence of positive occupational health psychology. *Psicothema*, 24(1), 66–72. Retrieved from <http://www.scopus.com/inward/record.url?eid=2-s2.0-84857023610&partnerID=tZOtx3y1>

- Bakker, A. B., & Schaufeli, W. B. (2008). Positive organizational behaviour: Engaged employees in flourishing organizations. *Journal of Organizational Behaviour*, 29, 147–154. <https://doi.org/10.1002/job.515>
- Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work & Stress*, 22(3), 187–200. <https://doi.org/10.1080/02678370802393649>
- Bakker A B., & Demerouti Evangelia. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bamford, M., Wong, C. a., & Laschinger, H. (2013). The influence of authentic leadership and areas of worklife on work engagement of registered nurses. *Journal of Nursing Management*, 21(3), 529–540. <https://doi.org/10.1111/j.1365-2834.2012.01399.x>
- Bandura, A. (1997). Self-efficacy: the exercise of control. *Choice Reviews Online*, 35(3), 35-1826-35–1826. <https://doi.org/10.5860/Choice.35-1826>
- Banks, G. C., McCauley, K. D., Gardner, W. L., & Guler, C. E. (2016). A meta-analytic review of authentic and transformational leadership: A test for redundancy. *Leadership Quarterly*, 27(4), 634–652. <https://doi.org/10.1016/j.leaqua.2016.02.006>
- Barnes, D. C., Collier, J. E., & Robinson, S. (2014). Customer delight and work engagement. *Journal of Services Marketing*, 28(5), 380–390. <https://doi.org/10.1108/JSM-02-2013-0051>
- Baron, R. M., & Kenny, D. a. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>

- Batista-Taran, L. C., Shuck, M. B., Gutierrez, C. C., & Baralt, S. (2009). The role of leadership style in employee engagement. In *Proceedings of the Eighth Annual College of Education & GSN Research Conference* (pp. 15–20).
- Bell, E., & Barkhuizen, N. (2011). The relationship between barriers to change and the work engagement of employees in a South African property management company. *SA Journal of Industrial Psychology*, 37(1), 1–12. <https://doi.org/10.4102/sajip.v37i1.935>
- Bentler, P. (1990). Comparative fit indices in structural models. *Psychological Bulletin*, 107(2), 238–246. <https://doi.org/res>
- Beukes, I., & Botha, E. (2013). Organizational commitment, work engagement and meaning of work of nursing staff in hospitals. *SA Journal of Industrial Psychology*, 39(2), 1–10. <https://doi.org/10.4102/sajip.v39i2.1144>
- Biswas, S. (2010a). Commitment as a mediator between psychological climate & citizenship behaviour. *Indian Journal of Industrial Relations*, 45(3), 411–423.
- Biswas, S. (2010b). Relationship between psychological climate and turnover intentions and its impact on organizational effectiveness: A study in Indian organizations. *IIMB Management Review*, 22(3), 102–110. <https://doi.org/10.1016/j.iimb.2010.04.013>
- Biswas, S. (2012). Psychological climate and affective commitment as antecedents of salespersons' job involvement. *Management Insight*, VII(2), 1–8.
- Biswas, S., & Varma, A. (2007). Psychological climate and individual performance in India: test of a mediated model. *Employee Relations*, 29(6), 664–676. <https://doi.org/10.1108/01425450710826131>
- Blaikie, N. (2003). *Analyzing quantitative data: From description to explanation* (1st ed.). Sage. Retrieved from https://books.google.co.za/books/about/Analyzing_Quantitative_Data.html?id=2c0N782mxnMC&redir_esc=y

- Blanche, T. M., & Durrheim, K. (1999). Histories of the present: Social science research in context. In *Research in practice: Applied methods for the social sciences* (pp. 1–17).
- Bledow, R., Schmitt, A., Frese, M., & Kühnel, J. (2011). The affective shift model of work engagement. *Journal of Applied Psychology, 96*(6), 1246–1257. <https://doi.org/10.1037/a0024532>
- Block, J., & Kremen, A. M. (1996). IQ and ego-resiliency: conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology, 70*(2), 349–61. <https://doi.org/10.1037/0022-3514.70.2.349>
- Boamah, S., & Laschinger, H. (2014). Engaging new nurses: the role of psychological capital and workplace empowerment. *Journal of Research in Nursing, 0*(0), 1–13. <https://doi.org/10.1177/1744987114528024>
- Boland, A., Cherry, M. G., & Dickson, R. (Eds.). (2017). *Doing a systematic review: A student's guide*. Sage. Retrieved from https://books.google.co.za/books/about/Doing_a_Systematic_Review.html?id=H1AIDwAAQBAJ&redir_esc=y
- Bonanno, G. A. (2005). Resilience in the face of potential trauma. *Journal of Clinical Psychology, 14*(3), 135–138. <https://doi.org/10.1002/jclp.20283>
- Bonner, L. (2016). A survey of work engagement and psychological capital levels, *25*(15), 865–872.
- Boshoff, A. B., van Wyk, R., Hoole, C., & Owen, J. H. (2002). The prediction of intention to quit by means of biographic variables , work commitment , role strain and psychological climate. *Management Dynamics, 11*(4), 14–28.
- Botha, A., Bussin, M., & De Swardt, L. (2011). An employer brand predictive model for talent attraction and retention. *SA Journal of Human Resource Management, 9*(1), 1–12. <https://doi.org/10.4102/sajhrm.v9i1.388>

- Bothma, F., & Roodt, G. (2012). Work-based identity and work engagement as potential antecedents of task performance and turnover intention: Unravelling a complex relationship. *SA Journal of Industrial Psychology, 38*(1), 1–17. <https://doi.org/10.4102/sajip.v38i1.893>
- Bothma, F., & Roodt, G. (2013). The validation of the turnover intention scale. *SA Journal of Human Resource Management, 11*(1), 1–12. <https://doi.org/10.4102/sajhrm.v11i1.507>
- Boyatzis, R. E. (2008). Leadership development from a complexity perspective. *Consulting Psychology Journal: Practice and Research, 60*(4), 298–313. <https://doi.org/10.1037/1065-9293.60.4.298>
- Branham, L. (2005). The 7 hidden reasons employees leave. *Business Book Review, 22*(3), 1–10.
- Breevaart, K., Bakker, A., Hetland, J., Demerouti, E., Olsen, O. K., & Espevik, R. (2014). Daily transactional and transformational leadership and daily employee engagement. *Journal of Occupational and Organizational Psychology, 87*(1), 138–157. <https://doi.org/10.1111/joop.12041>
- Briggs, S. R., & Cheek, J. M. (1986). The role of factor analysis in the development and evaluation of personality scales. *Journal of Personality, 54*(1), 106–148.
- Brown, S. P., Cron, W. L., & Slocum, J. W. (1998). Effects of trait competitiveness and perceived intraorganizational competition on salesperson goal setting and performance. *Journal of Marketing*. <https://doi.org/10.2307/1252289>
- Brown, S. P., & Leigh, T. W. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *The Journal of Applied Psychology, 81*(4), 358–368. <https://doi.org/10.1037/0021-9010.81.4.358>

- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. Guilford Press. Retrieved from https://books.google.co.za/books/about/Confirmatory_Factor_Analysis_for_Applied.html?id=KZwDkH2G2PMC&redir_esc=y
- Bryman, A., & Bell, E. (2003). Breaking down the quantitative/qualitative divide. In *Business Research Methods* (p. 465–478.).
- Buckingham, M., & Coffman, C. (2016). *First, break all the rules. What the world's greatest managers do differently*. Simon & Schuster, New York, NY.,. Retrieved from s3.amazonaws.com/academia.edu.documents/42132570/First_Break_All_the_Rules_Buckingham.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1520995779&Signature=85Lm1QBN2qT5AclB6U5zT6Ph08E%3D&response-content-disposition=inline%3B+filename%3DFirst_Break_All_The
- Byrne, B. M. (2012). *A primer of LISREL: Basic applications and programming for confirmatory factor analytic models*. Springer Science & Business Media.
- Campbell, N. S., Perry, S. J., Maertz, C. P., Allen, D. G., & Griffeth, R. W. (2013). All you need is ... resources: The effects of justice and support on burnout and turnover. *Human Relations*, 66(6), 759–782. <https://doi.org/10.1177/0018726712462614>
- Canipe, J. S. (2006). *Relationships among trust, organizational commitment, perceived organizational support, and turnover intentions*. Alliant International University, California School of Professional Psychology, San Diego. Retrieved from <http://sunzi.lib.hku.hk/ER/detail/hkul/3848250>
- Carasco-Saul, M., Kim, W., & Kim, T. (2015). Leadership and Employee Engagement. *Human Resource Development Review*, 14(1), 38–63. <https://doi.org/10.1177/1534484314560406>

- Carle, A. C., Jaffee, D., Vaughan, N. W., & Eder, D. (2009). Psychometric properties of three new National Survey of Student Engagement based engagement scales: An item response theory analysis. *Research in Higher Education, 50*(8), 775–794. <https://doi.org/10.1007/s11162-009-9141-z>
- Carmeli, A., Cohen-Meitar, R., & Elizur, D. (2007). The role of job challenge and organizational identification in enhancing creative behavior among employees in the workplace. *Journal of Creative Behavior, 41*(2), 75–90. <https://doi.org/10.1002/j.2162-6057.2007.tb01282.x>
- Castro, M. L., & Martins, N. (2010). The relationship between organizational climate and employee satisfaction in a South African information and technology organization. *SA Journal of Industrial Psychology, 36*(1), 1–9. <https://doi.org/10.4102/sajip.v36i1.800>
- Cattell, R. B. (2010). The scree test for the number of factors. *Multivariate Behavioural Research, 1*(2), 33. <https://doi.org/10.1207/s15327906mbr0102>
- Caza, A., Bagozzi, R. P., Woolley, L., Levy, L., & Caza, B. B. (2010). Psychological capital and authentic leadership: Measurement, gender, and cultural extension. *Asia-Pacific Journal of Business Administration, 2*(1), 53–70. <https://doi.org/10.1108/17574321011028972>
- Caza, A., & Jackson, B. (2011). *Authentic leadership*. The Sage handbook of leadership. Retrieved from <https://us.sagepub.com/en-us/nam/the-sage-handbook-of-leadership/book233409>
- Cerny, B. A., & Kaiser, H. F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate Behavioural Research, 12*(1), 43–47.
- Chang, C.-H. (Daisy), & Lyons, B. J. (2012). Not all aggressions are created equal: A multifoci approach to workplace aggression. *Journal of Occupational Health Psychology, 17*(1), 79–92. <https://doi.org/10.1037/a0026073>

- Chaudhary, R. (2014). A multilevel investigation of the factors. *The Psychologist-Manager Journal*, 17(2), 128–158.
- Chaudhary, R., Rangnekar, S., & Barua, M. K. (2012). Relationships between occupational self-efficacy, human resource development climate, and work engagement. *Team Performance Management*, 18(7/8), 370–383. <https://doi.org/10.1108/13527591211281110>
- Chaudhary, R., Rangnekar, S., & Barua, M. K. (2014). Organizational climate, climate strength and work engagement. *Procedia - Social and Behavioural Sciences*, 133, 291–303. <https://doi.org/10.1016/j.sbspro.2014.04.195>
- Chaurasia, S., & Shukla, A. (2014). Psychological capital , LMX, employee engagement & work role performance. *Indian Journal of Industrial Relations*, 50(2), 342–357.
- Chawla, D., & Sondhi, N. (2011). Assessing the role of organizational and personal factors in predicting turn-over intentions: A case of school teachers and BPO employees. *Decision*, 38(2), 5–33.
- Chen, S.-L. (2015). The relationship of leader psychological capital and follower psychological capital, job engagement and job performance: a multilevel mediating perspective. *The International Journal of Human Resource Management*, 26(18), 2349–2365. <https://doi.org/10.1080/09585192.2015.1020443>
- Chen, S. L., & Huang, Y. J. (2014). The influence mechanisms of transformational leadership on job engagement: the role of psychological capital and service climate. *NTU Management Review*, 25(1), 129–156. <https://doi.org/10.6226/NTURM2014.JAN.R11057>
- Chen, X. P., Eberly, M. B., Chiang, T. J., Farh, J. L., & Cheng, B. S. (2014). Affective trust in Chinese leaders: Linking paternalistic leadership to employee performance. *Journal of Management*, 40(3), 796–819. <https://doi.org/10.1177/0149206311410604>

- Cheung, C. M., & Qingbin, C. (2016). Setting the stage for effective safety leadership in construction: The antecedents of safety-specific transformational leadership behaviours. *Proceedings of the 32nd Annual ARCOM Conference, 1*, 517–526.
- Chinelato, R. S. de C., Ferreira, M. C., & Valentini, F. (2015). Evidence of validity of the job crafting behaviours scale. *Paideia, 25*(62), 325–332. <https://doi.org/10.1590/1982-43272562201506>
- Cho, Y. J., & Lewis, G. B. (2012). Turnover intention and turnover behaviour: Implications for retaining federal employees. *Review of Public Personnel Administration, 32*(1), 4–23. <https://doi.org/10.1177/0734371X11408701>
- Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology, 64*(1), 89–136. <https://doi.org/10.1111/j.1744-6570.2010.01203.x>
- Christian, M. S., & Slaughter, J. E. (2007). Work engagement: A meta-analytic review and directions for research in an emerging area. *Academy of Management Proceedings, 2007*(1), 1–6. <https://doi.org/10.5465/AMBPP.2007.26536346>
- Clapp-smith, R., Vogelgesang, G. R., & Avey, J. B. (2009). The mediating role of trust at the group level of analysis. *Journal of Leadership & Organizational Studies, 15*(3), 227–240. <https://doi.org/10.1177/1548051808326596>
- Coetzee, M., Bergh, Z., & Schreuder, D. (2010). The influence of career orientations on subjective work experiences. *SA Journal of Human Resource Management, 8*(1), 1–13. <https://doi.org/10.4102/sajhrm.v8i1.279>
- Coetzee, M., & Villiers, M. De. (2010). Sources of job stress, work engagement and career orientations of employees in a South African financial institution. *Southern African Business Review, 14*(1), 27–58. Retrieved from http://reference.sabinet.co.za/sa_epublication_article/sabr_v14_n1_a2

- Coetzer, C., & Rothmann, S. (2007). Job demands, job resources and work engagement of employees in a manufacturing organization. *Southern African Business Review*, 11(3), 17–32. Retrieved from https://my.unisa.ac.za/portal/tool/a87dd927-a9e0-4b59-0012-5ab7d72ca660/contents/faculties/service_dept/docs/Sabvie11-3-07.pdf#page=20
- Cohen, G., Blake, R. S., & Goodman, D. (2016). Does turnover intention matter? Evaluating the usefulness of turnover intention rate as a predictor of actual turnover rate. *Review of Public Personnel Administration*, 36(3), 240–263. <https://doi.org/10.1177/0734371X15581850>
- Cooper, D. A. (2010). *Quantitative descriptive research study of automobile sales consultants' intentions to terminate*. Doctoral dissertation, University of Phoenix.
- Coutu, D. L. (2002). How resilience works. *Harvard Business Review*, 80(5), 46–56. Retrieved from <http://web.a.ebscohost.com.ezproxy.royalroads.ca/bsi/pdfviewer/pdfviewer?vid=5&sid=0068dd2d-e8c8-45c3-9591-5dae518678d5%40sessionmgr4005&hid=4112>
- Coxen, L., Van der Vaart, L., & Stander, M. W. (2016). Authentic leadership and organizational citizenship behaviour in the public health care sector: The role of workplace trust. *SA Journal of Industrial Psychology*, 42(1), 1–13. <https://doi.org/10.4102/sajip.v42i1.1364>
- Culbertson, S. S., Mills, M. J., & Fullagar, C. J. (2012). Work engagement and work-family facilitation: Making homes happier through positive affective spillover. *Human Relations*, 65(9), 1155–1177. <https://doi.org/10.1177/0018726712440295>
- Dalal, R. S., Brummel, B. J., Wee, S., & Thomas, L. L. (2008). Defining employee engagement for productive research and practice. *Industrial and Organizational Psychology*, 1(1), 52–55. <https://doi.org/10.1111/j.1754-9434.2007.00008.x>

- Danish, R. Q., & Usman, A. (2010). Impact of reward and recognition on job satisfaction and motivation: An empirical study from Pakistan. *International Journal of Business and Management*, 5(2), 159–167. <https://doi.org/10.5539/ijbm.v5n2p159>
- Darmon, R. Y. (1990). Identifying sources of turnover costs: A segmental approach. *The Journal of Marketing*, 54(2), 46–56. <https://doi.org/10.2307/1251869>
- Datu, J. A. D., King, R. B., & Valdez, J. P. M. (2016). Psychological capital bolsters motivation, engagement, and achievement: Cross-sectional and longitudinal studies. *The Journal of Positive Psychology*, (October), 1–11. <https://doi.org/10.1080/17439760.2016.1257056>
- Datu, J. A. D., & Valdez, J. P. M. (2016). Psychological capital predicts academic engagement and well-being in Filipino High School students. *Asia-Pacific Education Researcher*, 25(3), 399–405. <https://doi.org/10.1007/s40299-015-0254-1>
- Dawkins, S., Martin, A., Scott, J., & Sanderson, K. (2013). Building on the positives: A psychometric review and critical analysis of the construct of psychological capital. *Journal of Occupational and Organizational Psychology*, 86(3), 348–370. <https://doi.org/10.1111/joop.12007>
- Dawson, J. F., González-romá, V., Davis, A., & West, M. A. (2008). Organizational climate and climate strength in UK hospitals. *European Journal of Work and Organizational Psychology*, 17(1), 89–111.
- De Bruin, D. P., Hill, C., Henn, C. M., & Muller, K.-P. (2013). Dimensionality of the UWES-17: An item response modelling analysis. *SA Journal of Industrial Psychology*, 39(2), 1–8. <https://doi.org/10.4102/sajip.v39i2.1148>
- De Vos, A. S., Delport, C. S. L., Fouché, C. B., & Strydom, H. (2011). *Research at grass roots: A primer for the social science and human professions*. Van Schaik Publishers, Pretoria.

- De Vos, A. S., Strydom, H., Fouche, C. B., & Delpont, C. S. L. (2011). *Research at grass roots. For the social science and human service profession* (4th ed.). Van Schaik Publishers.
- De Waal, J. J., & Pienaar, J. (2013). Towards understanding causality between work engagement and psychological capital. *SA Journal of Industrial Psychology*, 39(2), 1–10. <https://doi.org/10.4102/sajip.v39i2.1113>
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19(2), 109–134. [https://doi.org/10.1016/0092-6566\(85\)90023-6](https://doi.org/10.1016/0092-6566(85)90023-6)
- Demerouti, E., Mostert, K., & Bakker, A. B. (2010). Burnout and work engagement: A thorough investigation of the independency of both constructs. *Journal of Occupational Health Psychology*, 15(3), 209–222. <https://doi.org/10.1037/a0019408>
- DeVellis, R. F. (2016). *Scale development: Theory and applications*. Sage publications. Vol. 26. Sage publications.
- Diamantopoulos, A., & Siguaaw, J. A. (2000). *Introducing LISREL: A guide for the uninitiated*. (1st ed.). SAGE Publications.
- Ding, C. G., & Lin, C. P. (2006). Comparing the effects of determinants of turnover intentions between Taiwanese and US hospital employees. *Human Resource Development Quarterly*, 17(4), 403–421. <https://doi.org/10.1002/hrdq>
- Douglas, C., Ferris, G. R., & Perrewe, P. L. (2005). Leader political skill and authentic leadership. *Authentic Leadership: Origins, Development, and Effects*, 3, 139–154.
- Du Plessis, M. (2014). *The relationship between authentic leadership , psychological capital , followership and work engagement*. PhD Dissertation, University of the Western Cape.
- Du Plessis, Y., & Barkhuizen, E. N. (2011). Strategic role of human resource professionals in a South African context. In *15th European Association of Work and Organizational Psychology Conference, Maastricht, The Netherlands* (pp. 25–28).

- Du Plooy, J., & Roodt, G. (2010). Work engagement, burnout and related constructs as predictors of turnover intentions. *SA Journal of Industrial Psychology*, 36(1), 1–13. <https://doi.org/10.4102/sajip.v36i1.910>
- Du Plooy, J., & Roodt, G. (2013). Biographical and demographical variables as moderators in the prediction of turnover intentions. *SA Journal of Industrial Psychology*, 39(1), 1–12. <https://doi.org/10.4102/sajip.v39i1.1070>
- Du Toit, S., & Mels, G. (2002). *Supplementary notes on multiple imputation. Part A: Comparison with FIML in the case of normal data*. Retrieved from <http://www.ssicentral.com/lisrel/techdocs/imputation.pdf>
- Dwertmann, D. J. G., Nishii, L. H., & van Knippenberg, D. (2016). Disentangling the fairness and discrimination and synergy perspectives on diversity climate. *Journal of Management*, 42(5), 1136–1168. <https://doi.org/10.1177/0149206316630380>
- Dwyer, P., & Revell, S. H. (2016). Influences on new graduate nurse transition: A literature review using a social ecological framework. *Nursing Research*, 65(2), E52–E52.
- Eagly, A. H. (2005). Achieving relational authenticity in leadership: Does gender matter? *Leadership Quarterly*, 16(3), 459–474. <https://doi.org/10.1016/j.leaqua.2005.03.007>
- Efraty, D., & Sirgy, M. J. (1990). The effects of quality of working life (QWL) on employee behavioral responses. *Social Indicators Research*, 22(1), 31–47. <https://doi.org/10.1007/BF00286389>
- Elmes, D. G., Kantowitz, B. H., & Roediger III, H. L. (2012). *Research methods in psychology* (9th ed.). Wadsworth Cengage Learning. Retrieved from https://books.google.co.za/books/about/Research_Methods_in_Psychology.html?id=Mz1rK_vqzt4C&redir_esc=y

- Engelbrecht, A. S., Heine, G., & Mahembe, B. (2017). Integrity, ethical leadership, trust and work engagement. *Leadership & Organization Development Journal*, 38(3), 368–379. <https://doi.org/10.1108/LODJ-11-2015-0237>
- Everitt, B. S. (2006). *The Cambridge Dictionary of Statistics*. *Journal of Chemical Information and Modeling* (Vol. 53). <https://doi.org/10.1017/CBO9781107415324.004>
- Ferres, N., Travaglione, A., & Firms, I. (2003). Attitudinal differences between Generation-x and older employees. *International Journal of Organizational ...*, 6(3), 320–333. Retrieved from <http://www.usq.edu.au/extrafiles/business/journals/HRMJJournal/InternationalArticles/Volume6/FerresTravaglioneFirmsPaper3.pdf>
- Field, A. (2009). *Discovering Statistics Using SPSS*. Sage. https://doi.org/10.1111/insr.12011_21
- Fields, D. L. (2007). Determinants of follower perceptions of a leader's authenticity and integrity. *European Management Journal*, 25(3), 195–206. <https://doi.org/http://dx.doi.org/10.1016/j.emj.2007.04.005>
- Firth, L., Mellor, D. J., Moore, K. a., & Loquet, C. (2004). How can managers reduce employee intention to quit? *Journal of Managerial Psychology*, 19(2), 170–187. <https://doi.org/10.1108/02683940410526127>
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology. *American Psychologist*, 56(3), 218–226. <https://doi.org/10.1038/jid.2014.371>
- Gable, S. L., & Haidt, J. (2005). What (and why) is positive psychology? *Review of General Psychology*, 9(2), 103–110. <https://doi.org/10.1037/1089-2680.9.2.103>
- Gagnon, S., Paquet, M., Courcy, F., & Parker, C. P. (2009). Measurement and management of work climate: Cross-validation of the CRISO Psychological Climate Questionnaire. *Healthcare Management Forum*, 22(1), 57–65. [https://doi.org/10.1016/S0840-4704\(10\)60294-3](https://doi.org/10.1016/S0840-4704(10)60294-3)

- Gallup. (2013). *State of the global workplace*. Retrieved from www.securex.be/export/sites/default/.content/download-gallery/nl/brochures/Gallup-state-of-the-GlobalWorkplaceReport_20131.pdf
- Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. (2005). "Can you see the real me?" A self-based model of authentic leader and follower development. *The Leadership Quarterly*, 16(3), 343–372. <https://doi.org/10.1016/j.leaqua.2005.03.003>
- Gardner, W. L., Cogliser, C. C., Davis, K. M., & Dickens, M. P. (2011). Authentic leadership: A review of the literature and research agenda. *The Leadership Quarterly*, 22(6), 1120–1145. <https://doi.org/10.1016/j.leaqua.2011.09.007>
- Garg, P., & Rastogi, R. (2006). New model of job design: motivating employees' performance. *Journal of Management Development*, 25(6), 572–587. <https://doi.org/10.1108/02621710610670137>
- Garner, B. R., & Hunter, B. D. (2013). Examining the temporal relationship between psychological climate, work attitude, and staff turnover. *Journal of Substance Abuse Treatment*, 44(2), 193–200. <https://doi.org/10.1007/s12020-009-9266-z.A>
- Geldenhuys, M., Łaba, K., & Venter, C. M. (2014). Meaningful work, work engagement and organisational commitment. *SA Journal of Industrial Psychology*, 40(1), 1–10. <https://doi.org/10.4102/sajip.v40i1.1098>
- George, B. (2003). *Authentic Leadership. Rediscovering the Secrets to Creating Lasting Value*. Jossey-Bass. Retrieved from <https://www.wiley.com/en-us/Authentic+Leadership%3A+Rediscovering+the+Secrets+to+Creating+Lasting+Value-p-9780787969134>
- George, B., & Sims, P. (2007). *True North: Discover your authentic leadership*. Jossey-Bass. Retrieved from <https://www.safaribooksonline.com/library/view/true-north-discover/9780787987510/>

- George, B., Sims, P., & McLean, A. (2007). Discovering your authentic leadership. *Harvard Business Review*, (February), 129–138.
- Ghafoor, A., Qureshi, T. M., Khan, M. A., & Hijazi, S. T. (2011). Transformational leadership, employee engagement and performance: Mediating effect of psychological ownership. *African Journal of Business Management*, 5(17), 7391–7403. <https://doi.org/10.5897/AJBM11.126>
- Giallonardo, L. M., Wong, C. a., & Iwasiw, C. L. (2010). Authentic leadership of preceptors: Predictor of new graduate nurses' work engagement and job satisfaction. *Journal of Nursing Management*, 18(8), 993–1003. <https://doi.org/10.1111/j.1365-2834.2010.01126.x>
- Glen, C. (2006). Key skills retention and motivation: the war for talent still rages and retention is the high ground. *Industrial and Commercial Training*, 38(1), 37–45. <https://doi.org/10.1108/00197850610646034>
- Goffee, R., & Jones, G. (2005). Managing authenticity: The paradox of great leadership. *Harvard Business Review*, 87–94. Retrieved from <http://web.a.ebscohost.com.ezproxy.uwc.ac.za/ehost/pdfviewer/pdfviewer?vid=1&sid=58cfdc03-dd0f-4acf-be74-6c63598aa987%40sessionmgr4005&hid=4209>
- Görgens-Ekermans, G., & Herbert, M. (2013). Psychological capital: Internal and external validity of the psychological capital questionnaire (PCQ-24) on a South African sample. *SA Journal of Industrial Psychology*, 39(2), 1–13. <https://doi.org/10.4102/sajip.v39i2.1131>
- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management*, 26(3), 463–488. <https://doi.org/10.1177/014920630002600305>

- Grissom, J. A., Nicholson-Crotty, J., & Keiser, L. (2012). Does my Boss's gender matter? explaining job satisfaction and employee turnover in the public sector. *Journal of Public Administration Research and Theory*, 22(4), 649–673. <https://doi.org/10.1093/jopart/mus004>
- Gruman, J. A., & Saks, A. M. (2011). Performance management and employee engagement. *Human Resource Management Review*, 21(2), 123–136. <https://doi.org/10.1016/j.hrmr.2010.09.004>
- Guenther, H., Schreurs, B., van Emmerik, I. H., & Sun, S. (2017). What does it take to break the silence in teams: Authentic leadership and/or proactive followership? *Applied Psychology*, 66(1), 49–77. <https://doi.org/10.1111/apps.12076>
- Gupta, M., & Shaheen, M. (2017). Impact of work engagement on turnover intention: moderation by psychological capital in India. *Business: Theory and Practice*, 18((1)), 136–143. <https://doi.org/10.3846/btp.2017.014>
- Guthey, E., & Jackson, B. (2005). CEO portraits and the authenticity paradox. *Journal of Management Studies*, 42(5), 1057–1082. <https://doi.org/10.1111/j.1467-6486.2005.00532.x>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis*. Pearson (Seventh). Pearson.
- Halbesleben, J. R. B. (2010). A meta-analysis of work engagement: relationships with burnout, demands, resources, and consequences. *Work Engagement: A Handbook of Essential Theory and Research*. Retrieved from <https://www.econbiz.de/Record/a-meta-analysis-of-work-engagement-relationships-with-burnout-demands-resources-and-consequences-halbesleben-jonathon/10008737707>

- Halbesleben, J. R. B., Harvey, J., & Bolino, M. C. (2009). Too engaged? A conservation of resources view of the relationship between work engagement and work interference with family. *The Journal of Applied Psychology, 94*(6), 1452–1465. <https://doi.org/10.1037/a0017595>
- Hallberg, U. E., & Schaufeli, W. B. (2006). “Same same” but different? Can work engagement be discriminated from job involvement and organizational commitment? *European Psychologist, 11*(2), 119–127. <https://doi.org/10.1027/1016-9040.11.2.119>
- Hancock, J. I., Allen, D. G., Bosco, F. A., McDaniel, K. R., & Pierce, C. A. (2013). Meta-analytic review of employee turnover as a predictor of firm performance. *Journal of Management, 39*(3), 573–603. <https://doi.org/10.1177/0149206311424943>
- Harris, C. (2012). *Relationships Between Psychological Capital , Work Engagement and Organizational Citizenship Behaviour in South African Automotive Dealerships*.
- Harter, J., Schmidt, F., & Hayes, T. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes. *Journal of Applied Psychology, 87*(2), 268–279. <https://doi.org/10.1037/0021-9010.87.2.268>
- Harter, S. (2002). *Authenticity*. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of Positive Psychology*. London: Oxford University Press.
- Harter, T. W. (2001). Minimizing absenteeism in the workplace: Strategies for nurse managers. *Nursing Economics, 19*(2), 53–55.
- Hassan, A., & Ahmed, F. (2011). Authentic leadership, trust and work engagement. *International Journal of Human and Social Sciences, 6*(3), 164–170. Retrieved from <http://ejournal.narotama.ac.id/files/v6-3-24.pdf>
- Hassan, S., & Rohrbaugh, J. (2011). The role of psychological climate on public sector employees’ organizational commitment: An empirical assessment for three occupational groups. *International Public Management Journal, 14*(1), 27–62.

- Heavey, A. L., Holwerda, J. A., & Hausknecht, J. P. (2013). Causes and consequences of collective turnover: A meta-analytic review. *Journal of Applied Psychology, 98*(3), 412–453. <https://doi.org/10.1037/a0032380>
- Hellriegel, D., & Slocum, J. W. (1974). Organizational climate: Measures, research and contingencies. *Academy of Management Journal, 17*(2), 255–280. <https://doi.org/10.2307/254979>
- Hicks, R. E., & Knies, E.-M. (2015). Psychological capital, adaptability, coping with change, and employee engagement in a multinational company. *Journal of International Business Disciplines, 10*(2), 36–51. Retrieved from <http://0-search.ebscohost.com.library.ucc.ie/login.aspx?direct=true&db=bth&AN=114667017&site=ehost-live>
- Hodges, H. F., Keeley, A. C., & Grier, E. C. (2005). Professional resilience, practice longevity, and parse's theory for Baccalaureate Education. *Journal of Nursing Education, 44*(12), 548–554.
- Hoole, C., & Bonnema, J. (2015). Work engagement and meaningful work across generational cohorts. *SA Journal of Human Resource Management, 13*(1), 1–11. <https://doi.org/10.4102/sajhrm.v13i1.681>
- Hoole, C., & Hotz, G. (2016). The impact of a total reward system of work engagement. *SA Journal of Industrial Psychology, 42*(1), 1–14. <https://doi.org/10.4102/sajip.v42i1.1317>
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods, 6*(1), 53–60.
- Hoyle, R. H., & Kenny, D. A. (1999). Statistical power and tests of mediation. In *Statistical strategies for small sample research* (1st ed., pp. 195–222). SAGE Publications.

- Hsieh, C.-C., & Wang, D.-S. (2015). Does supervisor-perceived authentic leadership influence employee work engagement through employee-perceived authentic leadership and employee trust? *The International Journal of Human Resource Management*, 26(18), 2329–2348. <https://doi.org/10.1080/09585192.2015.1025234>
- Ilies, R., Curşeu, P. L., Dimotakis, N., & Spitzmuller, M. (2013). Leaders' emotional expressiveness and their behavioural and relational authenticity: Effects on followers. *European Journal of Work and Organizational Psychology*, 22(1), 4–14. <https://doi.org/10.1080/1359432X.2011.626199>
- Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaemonic well-being: Understanding leader–follower outcomes. *The Leadership Quarterly*, 16(3), 373–394. <https://doi.org/10.1016/j.leaqua.2005.03.002>
- Inkson, J. H. . K. ., Pugh, D. . S. ., & Hickson, D. . J. . (1970). Organization context and structure : An abbreviated replication. *Administrative Science Quarterly*, 15(3), 318–329.
- Iun, J., & Huang, X. (2007). How to motivate your older employees to excel? The impact of commitment on older employees' performance in the hospitality industry. *International Journal of Hospitality Management*, 26(4), 793–806. <https://doi.org/10.1016/j.ijhm.2006.08.002>
- James, L. A., & James, L. R. (1989). Integrating work environment perceptions: Explorations into the measurement of meaning. *Journal of Applied Psychology*, 74(5), 739–751. <https://doi.org/10.1037/0021-9010.74.5.739>
- James, L. R., Choi, C. C., Ko, C.-H. E., McNeil, P. K., Minton, M. K., Wright, M. A., & Kim, K. (2008). Organizational and psychological climate: A review of theory and research. *European Journal of Work and Organizational Psychology*, 17(1), 5–32. <https://doi.org/10.1080/13594320701662550>

- James, L. R., Hater, J. J., Gent, M. J., & Bruni, J. R. . (1978). Psychological climate: Implications from cognitive social learning theory and interactional psychology. *Personnel Psychology*, 31(4), 783–813.
- Jawahar, I. M., & Hemmasi, P. (2006). Perceived organizational support for women's advancement and turnover intentions. *Women in Management Review*, 21(8), 643–661. <https://doi.org/10.1108/09649420610712036>
- Jensen, S. M., & Luthans, F. (2006). Entrepreneurs as authentic leaders: impact on employees' attitudes. *Leadership & Organization Development Journal*, 27(8), 646–666. <https://doi.org/10.1108/01437730610709273>
- Jiang, H., & Men, R. L. (2015). Creating an engaged workforce. *Communication Research*, 1–19. <https://doi.org/10.1177/0093650215613137>
- Jones, D. A., & Skarlicki, D. P. (2003). The relationship between perceptions of fairness and voluntary turnover among retail employees. *Journal of Applied Social Psychology*, 33(6), 1226–1243. <https://doi.org/10.1111/j.1559-1816.2003.tb01947.x>
- Joo, B.-K., Lim, D. H., & Kim, S. (2016). Enhancing work engagement: The roles of psychological capital, authentic leadership, and work empowerment. *Leadership & Organization Development Journal*, 37(8), 1117–1134. <https://doi.org/10.1108/LODJ-01-2015-0005>
- Joreskog, K. G., & Sorbom, D. (1993). LISREL 8: Structural equation modeling with the SIMPLIS command language. *Scientific Software Internationa*, xvi, 202. Retrieved from <http://psycnet.apa.org/psycinfo/1993-97878-000>
- Jöreskog, K. G., & Sörbom, D. (2003). LISREL 8.7. Lincolnwood, IL: Scientific Software International.
- Jöreskog, K. G., & Sörbom, D. (2006a). *An introduction to LISREL 8 . 80 for Windows*. Retrieved from www.ssicentral.com/lisrel/techdocs/Session1.pdf

- Jöreskog, K. G., & Sörbom, D. (2006b). LISREL for Windows (Version 8.80)[Computer Software]. Lincolnwood, IL: Scientific Software International. Lincolnwood, IL: Scientific Software International. Retrieved from <http://www.ssicentral.com/lisrel/references.html>
- Joseph, D., Ng, K. Y., Koh, C., & Ang, S. (2007). Turnover of information technology professionals: a narrative review, meta-analytic structural equation modeling, and model development. *Mis Quarterly*, 31(3), 547–577.
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755–768. <https://doi.org/10.1037/0021-9010.89.5.755>
- Jung, D. I., & Avolio, B. J. (1999). Effects of leadership style and followers' cultural orientation on performance in group and individual task conditions. *Academy of Management Journal*, 42(2), 208–218. <https://doi.org/10.2307/257093>
- Kahn, W. (1992). To be fully there. *Human Relations*, 45(4), 321–349.
- Kahn, W. a. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724. <https://doi.org/10.2307/256287>
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31–36.
- Kang, M. (2014). Understanding public engagement: Conceptualizing and measuring its influence on supportive behavioural intentions. *Journal of Public Relations Research*, 26(5), 399–416. <https://doi.org/10.1080/1062726X.2014.956107>
- Karatepe, O. M., & Karadas, G. (2015). Do psychological capital and work engagement foster frontline employees' satisfaction?: A study in the hotel industry. *International Journal of Contemporary Hospitality Management*, 27(6), 1254–1278. <https://doi.org/http://dx.doi.org/10.1108/IJCHM-01-2014-0028>

- Karatepe, O. M., & Ngeche, R. N. (2012). Does job embeddedness mediate the effect of work engagement on job outcomes? A study of hotel employees in Cameroon. *Journal of Hospitality Marketing and Management*, 21(4), 440–461. <https://doi.org/10.1080/19368623.2012.626730>
- Karatepe, O. M., & Talebzadeh, N. (2016). An empirical investigation of psychological capital among flight attendants. *Journal of Air Transport Management*, 55(August), 193–202. <https://doi.org/10.1016/j.jairtraman.2016.06.001>
- Kataria, A., Garg, P., & Rastogi, R. (2013a). Does psychological climate augment OCBs? The mediating role of work engagement. *The Psychologist-Manager Journal*, 16(4), 217–242. <https://doi.org/10.1037/mgr0000007>
- Kataria, A., Garg, P., & Rastogi, R. (2013b). Psychological climate and organizational effectiveness : Role of work engagement. *IUP Journal of Organizational Behaviour*, 12(3), 33–46.
- Keller, A. C., Spurk, D., Baumeler, F., & Hirschi, A. (2016). Competitive climate and workaholism: Negative sides of future orientation and calling. *Personality and Individual Differences*, 96, 122–126. <https://doi.org/10.1016/j.paid.2016.02.061>
- Kelloway, K. E. (1998). *Using LISREL for structural equation modeling : a researcher's guide*. Retrieved from <http://trove.nla.gov.au/work/7408626?q&versionId=8528240>
- Kerlinger, F. N., & Lee, H. B. (2000). Survey research. Foundations of behavioural research. In *Foundations of behavioural research*,, 599-619. (pp. 599–619).
- Kernis, M. H. (2003). Towards a conceptualization of optimal self-esteem. *Psychological Inquiry*, 14(1), 1–26. https://doi.org/10.1207/S15327965PLI1401_01
- Kirschenbaum, A., & Weisberg, J. (1990). Predicting work turnover.pdf. *Human Relations*, 43(9), 829–847.

- Klenke, K. (2007). Authentic leadership: A self, leader, and spiritual identity perspective. *International Journal of Leadership Studies*, 3(1), 68–97. <https://doi.org/10.1016/j.leaqua.2007.03.003>
- Kochanski, J., & Ledford, G. (2001). “How to keep me”—retaining technical professionals. *Research Technology Management*, 44(3), 31–38.
- Kotzé, K., & Roodt, G. (2005). Factors that affect the retention of managerial and specialist staff: An exploratory study of an employee commitment model. *SA Journal of Human Resource Management*, 3(2), 48–55. <https://doi.org/10.4102/sajhrm.v3i2.65>
- Kuenzi, M., & Schminke, M. (2009). Assembling fragments into a lens: A review, critique, and proposed research agenda for the organizational work climate literature. *Journal of Management*, 35(3), 634–717. <https://doi.org/10.1177/0149206308330559>
- Kuhnel, J., Sonnentag, S., & Bledow, R. (2012). Resources and time pressure as day-level antecedents of work engagement. *Journal of Organizational Psychology*, 85, 181–198. <https://doi.org/10.1111/j.2044-8325.2011.02022.x>
- Kular, S., Gatenby, M., Rees, C., Soane, E., & Truss, K. (2008). *Employee engagement: A literature review*. <https://doi.org/October 2008>
- Kulophas, D., Ruengtrakul, A., & Wongwanich, S. (2015). The relationships among authentic leadership, teachers’ work engagement, academic optimism and school size as moderator: A conceptual model. *Procedia - Social and Behavioural Sciences*, 191, 2554–2558. <https://doi.org/http://dx.doi.org/10.1016/j.sbspro.2015.04.298>
- Lambert, E. G., Cluse-Tolar, T., Pasupuleti, S., Prior, M., & Allen, R. I. (2012). A test of a turnover intent model. *Administration in Social Work*, 36(1), 67–84. <https://doi.org/10.1080/03643107.2010.551494>

- Langkamer, K., & Ervin, K. (2008). Psychological climate, organizational commitment and morale: Implications for Army captains' career intent. *Military Psychology*, 20(4), 219–236. <https://doi.org/10.1080/08995600802345113>
- Larson, M. D., Norman, S. M., Hughes, L. W., & Avey, J. B. (2013). Psychological capital: A new lens for understanding employee fit and attitudes. *International Journal of Leadership Studies*, 8(1), 32–48. <https://doi.org/10.1002/hrm>
- Laschinger, S. H. K., Grau, A. L., Finegan, J., & Wilk, P. (2012). Predictors of new graduate nurses' workplace well-being: testing the job demands-resources model. *Health Care Management Review*, 37(2), 175–86. <https://doi.org/10.1097/HMR.0b013e31822aa456>
- Lee, J. H. J., & Ok, C. M. (2015). Drivers of work engagement: An examination of core self-evaluations and psychological climate among hotel employees. *International Journal of Hospitality Management*, 44, 84–98. <https://doi.org/10.1016/j.ijhm.2014.10.008>
- Leroy, H., Anseel, F., Gardner, W. L., & Sels, L. (2015). Authentic leadership, authentic followership, basic need satisfaction, and work role performance. *Journal of Management*, 41(6), 1677–1697. <https://doi.org/10.1177/0149206312457822>
- Levene, R. A. (2015). *Positive psychology at work: Psychological capital and thriving as pathways to employee engagement*. Masters Dissertation, University of Pennsylvania. Retrieved from repository.upenn.edu/mapp_capstone/88/
- Li, F., Yu, K. F., Yang, J., Qi, Z., & Fu, J. H. (2014). Authentic leadership, traditionality, and interactional justice in the Chinese context. 真实型领导力、传统性与交互公平感在中国环境中的关系. *Management and Organization Review*, 10(2), 249–273. <https://doi.org/10.1111/more.12027>

- Lindell, M. K., & Brandt, C. J. (2000). Climate quality and climate consensus as mediators of the relationship between organizational antecedents and outcomes. *Journal of Applied Psychology, 85*(3), 331–348.
- Lipman, V. (2013). Surprising, disturbing facts from the mother of all employee engagement surveys - Forbes. Retrieved August 21, 2015, from <http://www.forbes.com/sites/victorlipman/2013/09/23/surprising-disturbing-facts-from-the-mother-of-all-employee-engagement-surveys/>
- Little, B., & Little, P. (2006). Employment engagement: Conceptual issues. *Journal of Organizational Culture, Communications and Conflict, 10*(1), 111–120.
- Little, L. M., Gooty, J., & Nelson, D. L. (2007). Positive psychological capital: Has positivity clouded measurement rigor. Positive organizational behaviour. In *Positive organizational behaviour:* (pp. 191–209). <https://doi.org/10.4135/9781446212752.n7>
- Liu, L., Chang, Y., Fu, J., Wang, J., & Wang, L. (2012). The mediating role of psychological capital on the association between occupational stress and depressive symptoms among Chinese physicians: a cross-sectional study. *BMC Public Health, 12*(1), 219. <https://doi.org/10.1186/1471-2458-12-219>
- Llorens, J. J., & Stazyk, E. C. (2011). How important are competitive wages? Exploring the impact of relative wage rates on employee turnover in State Government. *Review of Public Personnel Administration, 31*(2), 111–127. <https://doi.org/10.1177/0734371X10386184>
- Lo, S., & Aryee, S. (2003). Psychological contract breach in a Chinese context: an integrative approach. *Journal of Management Studies, 40*(4), 1005–1020. <https://doi.org/10.1111/1467-6486.00368>

- Louw, Q. A., Morris, L. D., & Grimmer-Somers, K. (2007). The Prevalence of low back pain in Africa: A systematic review. *BMC Musculoskeletal Disorders*, 8(105), 1–14. <https://doi.org/10.1186/1471-2474-8-105>
- Lumley, E. J., Coetzee, M., Tladinyane, R., & Ferreira, N. (2011). Exploring the job satisfaction and organizational commitment of employees in the information technology environment. *Southern African Business Review*, 15(1), 100–118.
- Luo, H., & Hao, Z. H. (2010). The relationships among psychological capital, job burnout and turnover intention in 466 nurses. *Chin J Nurs*, 45(10), 933–935.
- Luo, W., Hughes, J. N., Liew, J., & Kwok, O. (2009). Classifying academically at-risk first graders into engagement types: Association with long-term achievement trajectories. *The Elementary School Journal*, 109(4), 380–405. <https://doi.org/10.1007/s10552-008-9164-3>. Association
- Luthans, F. (2002). Positive organizational behaviour: Developing and managing psychological strengths. *Academy of Management Executive*, 16(1), 57–72. <https://doi.org/10.5465/AME.2002.6640181>
- Luthans, F. (2002). The need for and meaning of positive organizational behaviour. *Journal of Organizational Behaviour*, 23, 695–706. <https://doi.org/10.1002/job.165>
- Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: Toward a micro-intervention. *Journal of Organizational Behaviour*, 27(3), 387–393.
- Luthans, F., Avey, J. B., Avolio, B. J., & Peterson, S. J. (2010). The development and resulting performance impact of positive psychological capital. *Human Resource Development Quarterly*, 21(1), 41–67. <https://doi.org/10.1002/hrdq.20034>
- Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, 60, 541–572.

- Luthans, F., Avolio, B. J., Walumbwa, F. O., & Li, W. (2005). The psychological capital of Chinese workers: Exploring the relationship with performance. *Management and Organization Review*, 1(2), 249–271. <https://doi.org/10.1111/j.1740-8784.2005.00011.x>
- Luthans, F., & Jensen, S. M. (2002). Hope: A new positive strength for human resource development. *Human Resource Development Review*, 1(3), 304–322. <https://doi.org/10.1177/1534484302013003>
- Luthans, F., Luthans, K. W., & Luthans, B. C. (2004). Positive psychological capital: Beyond human and social capital. *Business Horizons*, 47(1), 45–50.
- Luthans, F., Norman, S. M., Avolio, B. J., & Avey, J. B. (2008). The mediating role of psychological capital in the supportive organizational climate— employee performance relationship. *Journal of Organizational Behaviour*, 29, 219–238. <https://doi.org/10.1002/job.507>
- Luthans, F., Youssef, C., & Avolio, B. (2007). *Psychological capital: Developing the human competitive edge*. (p. 3). Oxford: Oxford University Press. Retrieved from www.academia.edu/download/43468935/_Fred_Luthans_Carolyn_M._Youssef_Bruce_J._Avolio__BookFi.org.pdf
- Luthans, F., & Youssef, C. M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics*, 33(2), 143–160. <https://doi.org/10.1016/j.orgdyn.2004.01.003>
- Luthans, F., & Youssef, C. M. (2007). Emerging positive organizational behaviour. *Journal of Management*, 33(3), 321–349. <https://doi.org/10.1177/0149206307300814>
- Luthans, K. W., Luthans, B. C., & Palmer, N. F. (2016). A positive approach to management education. *Journal of Management Development*, 35(9), 1098–1118. <https://doi.org/10.1108/JMD-06-2015-0091>

- Luthans, & Avolio, B. J. (2003). Authentic leadership: a positive development approach. In *Positive organizational scholarship* (pp. 241–261). Retrieved from https://scholar.google.co.za/scholar?hl=en&q=Authentic+leadership%3A+a+positive+developmental+approach&btnG=&as_sdt=1%2C5&as_sdtp=
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: a critical evaluation and guideline for future work. *Child Development, 71*(3), 543–562. <https://doi.org/10.1111/1467-8624.00164>
- Lyubovnikova, J., Legood, A., Turner, N., & Mamakouka, A. (2017). How authentic leadership influences team performance: The mediating role of team reflexivity. *Journal of Business Ethics, 141*(1), 59–70. <https://doi.org/10.1007/s10551-015-2692-3>
- Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology, 1*(1), 3–30. <https://doi.org/10.1111/j.1754-9434.2007.0002.x>
- Mahembe, B. (2014). *The development and empirical evaluation of an extended learning potential structural model*. Doctoral dissertation, Stellenbosch: Stellenbosch University.
- Mahon, E. G., Taylor, S. N., & Boyatzis, R. E. (2014). Antecedents of organizational engagement: Exploring vision, mood and perceived organizational support with emotional intelligence as a moderator. *Frontiers in Psychology, 5*(NOV), 1–11. <https://doi.org/10.3389/fpsyg.2014.01322>
- Malinowski, P., & Lim, H. J. (2015). Mindfulness at work: Positive affect, hope, and optimism mediate the relationship between dispositional mindfulness, work engagement, and well-being. *Mindfulness, 6*(6), 1250–1262. <https://doi.org/10.1007/s12671-015-0388-5>

- Manala, M. J. (2014). Servant Leadership - A required leadership model for efficient and effective service delivery in a democratic South Africa. *Siudia Historiae Ecclesiasticae*.
- March, J. G., & Simon, H. A. (1958). *Organizations*. (E. W. Oxford, Ed.). Oxford, England: Wiley. Retrieved from <http://psycnet.apa.org/record/1958-15040-000>
- Markos, S., & Sridevi, S. (2010). Employee engagement: The key to improving performance. *International Journal of Business and Management*, 5(12), 89–96. <https://doi.org/E-ISSN 1833-8119>
- Marsh, H. W. (1996). Positive and negative global self-esteem: A substantively meaningful distinction or artifacts? *Journal of Personality and Social Psychology*, 70(4), 810–819. <https://doi.org/10.1037/0022-3514.70.4.810>
- Martin, A., & Roodt, G. (2008). Perception of organizational commitment, job satisfaction and turnover intentions in a post-merger South African tertiary institution. *SA Journal of Industrial Psychology*, 34(1), 23–31. <https://doi.org/10.4102/sajip.v34i1.415>
- Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *The Journal of Applied Psychology*, 93(3), 498–512. <https://doi.org/10.1037/0021-9010.93.3.498>
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Masten, A. S. (2001). Ordinary magic. Resilience processes in development. *The American Psychologist*, 56(3), 227–238. <https://doi.org/10.1037/0003-066X.56.3.227>
- Masten, A. S., Cutuli, J. J., Herbers, J. E., & Reed, M.-G. J. (2009). *Resilience in development*. Oxford University Press. Retrieved from https://works.bepress.com/jj_cutuli/4/

- Masten, A. S., & Reed, M. G. (2002). Resilience in development (pp. 74–88). Oxford University Press. Retrieved from <https://experts.umn.edu/en/publications/resilience-in-development-3>
- Maximo, N. (2015). *Authentic leadership , trust and work engagement : The mediating role of psychological safety*.
- May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*, 77(1), 11–37. <https://doi.org/10.1348/096317904322915892>
- Mazzetti, G., Guglielmi, D., Chiesa, R., & Mariani, M. G. (2016). Happy employees in a resourceful workplace: just a direct relationship?: A study on the mediational role of psychological capital. *Career Development International*, 21(7), 682–696. <https://doi.org/10.1108/IJEBR-02-2016-0064>
- Medhurst, A., & Albrecht, S. (2011). Salesperson engagement and performance: A theoretical model. *Journal of Management and Organization*, 17(3), 398–411. Retrieved from <http://www.scopus.com/inward/record.url?eid=2-s2.0-79955083826&partnerID=tZOtx3y1>
- Mels, G. (2003). *A workshop on structural equation modelling with LISREL 8.54 for Windows*.
- Men, L. R., & Stacks, D. (2014). The effects of authentic leadership on strategic internal communication and employee-organization relationships. *Journal of Public Relations Research*, 26(4), 301–324. <https://doi.org/10.1080/1062726X.2014.908720>
- Men, L. R., & Stacks, D. W. (2013). The impact of leadership style and employee empowerment on perceived organizational reputation. *Journal of Communication Management*, 17(2), 171–192. <https://doi.org/10.1108/13632541311318765>
- Mendes, F., & Stander, M. W. (2011). Positive organization: The role of leader behaviour in work engagement and retention. *SA Journal of Industrial Psychology*, 37(1), 1–13.

- Meng, Y. S., Qi, S. H., & Li, L. (2011). A study on the impact of hotel leaders' psychological capital on employee engagement. *8th International Conference on Service Systems and Service Management - Proceedings of ICSSSM'11*. <https://doi.org/10.1109/ICSSSM.2011.5959424>
- Mercer, L. L. C. (2015). *Engaging employees to drive global business success: Insights from Mercer's What's Working™ research*. Mercer. Retrieved from https://www.dgfp.de/hr-wiki/Engaging_employees_to_drive_global_business_success__Insights_from_Mercer_s_....pdf
- Meyers, M. C., & van Woerkom, M. (2017). Effects of a strengths intervention on general and work-related well-being: The mediating role of positive affect. *Journal of Happiness Studies, 18*, 671–689. <https://doi.org/10.1007/s10902-016-9745-x>
- Mhatre, K., & Riggio, R. (2014). Charismatic and transformational leadership: Past, present, and future. In *The Oxford handbook of leadership and*. Retrieved from https://books.google.co.za/books?hl=en&lr=&id=_iqTAWAAQBAJ&oi=fnd&pg=PA221&dq=Charismatic+and+Transformational+Leadership:+Past,+Present,+and+Future+&ots=SyUml7hk54&sig=LLKXrO3CCmHXhuZmIUeDT-1sM
- Mills, M. J., Fleck, C. R., & Kozikowski, A. (2013). Positive psychology at work: A conceptual review, state-of-practice assessment, and a look ahead. *Journal of Positive Psychology, 8*(2), 153–164. <https://doi.org/10.1080/17439760.2013.776622>
- Min, H., Kim, H. J., & Lee, S. (2015). Extending the challenge – hindrance stressor framework: The role of psychological capital. *International Journal of Hospitality Management, 50*, 105–114. <https://doi.org/10.1016/j.ijhm.2015.07.006>
- Mitra, A., Jenkins, G. D., Jr, & Gupta, N. (1992). A meta-analytic review of the relationship between absence and turnover. *Journal of Applied Psychology, 77*(6), 879–889. <https://doi.org/10.1037/0021-9010.77.6.879>

- Mohammed, D. U., Yusuf, M. O., Sanni, I. M., Ifeyinwa, T. N., Bature, N. U., & Kazeem, A. O. (2014). The Relationship between leadership styles and employees' performance in organizations (A study of selected business organizations in Federal Capital Territory, Abuja Nigeria). *European Journal of Business and ManagementOnline*, 6(22), 2222–2839.
- Mohanty, N., & Kolhe, S. M. (2016). Understanding psychological capital: Research perspectives. *Indian Journal of Positive Psychology*, 7(4), 485–494.
- Morrell, K., Loan-Clarke, J., & Wilkinson, A. (2004). The role of shocks in employee turnover. *British Journal of Management*, 15(4), 335–349. <https://doi.org/10.1111/j.1467-8551.2004.00423.x>
- Mowday, R. T., Porter, L. W., & Steers, R. (1982). Organizational linkage: the psychology of commitment, absenteeism and turnover. *Journal of Occupational Psychology* (2008), 10(3). <https://doi.org/10.1111/j.2044-8325.1990.tb00506.x>
- Muchiri, M. K. (2011). Leadership in context: A review and research agenda for sub-Saharan Africa. *Journal of Occupational and Organizational Psychology*, 84(3), 440–452. <https://doi.org/10.1111/j.2044-8325.2011.02018.x>
- Mulaik, S. a., James, L. R., Van Alstine, J., Bennett, N., Lind, S., & Stilwell, C. D. (1989). Evaluation of goodness-of-fit indices for structural equation models. *Psychological Bulletin*, 105(3), 430–445. <https://doi.org/10.1037/0033-2909.105.3.430>
- Munro, Z. (2015). *Work-life balance, job satisfaction and turnover intention amongst information technology employees*. Unpublished master's dissertation, University of South Africa, Pretoria.
- Namazi, M., & Namazi, N.-R. (2016). Conceptual analysis of moderator and mediator variables in business research. *Procedia Economics and Finance*, 36(16), 540–554. [https://doi.org/10.1016/S2212-5671\(16\)30064-8](https://doi.org/10.1016/S2212-5671(16)30064-8)

- Neider, L. L., & Schriesheim, C. A. (2011). The authentic leadership inventory (ALI): Development and empirical tests. *Leadership Quarterly*, 22(6), 1146–1164. <https://doi.org/10.1016/j.leaqua.2011.09.008>
- Neuman, W. L. (2014). *Social research methods: Qualitative and quantitative approaches. Relevance of social research* (Vol. 8). <https://doi.org/10.2307/3211488>
- Newman, A., Thanacoody, R., & Hui, W. (2011). The impact of employee perceptions of training on organizational commitment and turnover intentions: A study of multinationals in the Chinese service sector. *International Journal of Human Resource Management*, 22(8), 1765–1787. <https://doi.org/10.1080/09585192.2011.565667>
- Nigah, N., Davis, A. J., & Hurrell, S. A. (2012). The impact of buddying on psychological capital and work engagement: An empirical study of socialization in the professional services sector. *Thunderbird International Business Review*, 54(6), 891–905. <https://doi.org/10.1002/tie.21510>
- Nikoloski, K. (2015). Charismatic leadership and power: Using the power of charisma for better leadership in the enterprises. *Journal of Process Management*, 3(2), 18–27. Retrieved from <http://eprints.ugd.edu.mk/14393/1/7>
- Northhouse, P. G. (2015). Authentic Leadership. In *Leadership: Theory and Practice* (6th ed., p. 569). SAGE Publications, Inc.
- Norton, T. A., Zacher, H., Parker, S. L., & Ashkanasy, N. M. (2017). Bridging the gap between green behavioral intentions and employee green behavior: The role of green psychological climate. *Journal of Organizational Behavior*, 38(7), 996–1015. <https://doi.org/10.1002/job.2178>
- Nunnally, J. C. (1967). *Psychometric theory*. Retrieved from <http://psycnet.apa.org/psycinfo/2003-00036-000>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3ed, 1994).

- Nusair, K., & Hua, N. (2010). Comparative assessment of structural equation modeling and multiple regression research methodologies: E – commerce context. *Tourism Management, 31*(3), 314–324.
- Nyamubarwa, W. (2013). “I am considering leaving soon” – Turnover Intentions of Academic Librarians in Zimbabwe. *Journal of Business Administration and Education, 4*(1), 76–90.
- Olivier, A. L., & Rothmann, S. (2007). Antecedents of work engagement in a multinational oil company. *SA Journal of Industrial Psychology, 33*(3), 49–56. <https://doi.org/10.4102/sajip.v33i3.396>
- Oosthuizen, R., Coetzee, M., & Munro, Z. (2016). Work-life balance, job satisfaction and turnover intention amongst information technology employees. *Southern African Business Review, 20*(November), 446–467.
- Paek, S., Schuckert, M., Kim, T. T., & Lee, G. (2015). Why is hospitality employees’ psychological capital important? The effects of psychological capital on work engagement and employee morale. *International Journal of Hospitality Management, 50*, 9–26. <https://doi.org/10.1016/j.ijhm.2015.07.001>
- Pallant, J. (2016). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS, 6th Edition*.
- Parker, C. P., Baltes, B. B., Young, S. A., Huff, J. W., Altmann, R. A., Lacost, H. A., & Roberts, J. E. (2003). Relationships between psychological climate perceptions and work outcomes: A meta-analytic review. *Journal of Organizational Behaviour, 24*(4), 389–416. <https://doi.org/10.1002/job.198>
- Parker, S. K. (1998). Enhancing role breadth self-efficacy: The roles of job enrichment and other organizational interventions. *Journal of Applied Psychology, 83*(6), 835–852. <https://doi.org/10.1037/0021-9010.83.6.835>

- Parr, A. D., & Hunter, S. T. (2014). Enhancing work outcomes of employees with autism spectrum disorder through leadership: Leadership for employees with autism spectrum disorder. *Autism*, 18(5), 545–554. <https://doi.org/10.1177/1362361313483020>
- Pati, S., & Kumar, P. (2010). Employee engagement : Role of self-efficacy, organizational support & supervisor support. *Indian Journal of Industrial Relations*, 46(1), 126–137.
- Patton, M. (2002). *Qualitative evaluation and research methods, 3rd ed.* Sage Publications, Inc. Retrieved from <http://psycnet.apa.org/psycinfo/1990-97369-000>
- Penger, S., & Cerne, M. (2014). Authentic leadership, employees' job satisfaction, and work engagement: A hierarchical linear modelling approach. *Economic Research*, 27(1), 508–526. <https://doi.org/10.1080/1331677X.2014.974340>
- Peterson, S. J., & Byron, K. (2008). Exploring the role of hope in job performance: results from four studies. *Journal of Organizational Behaviour*, 29, 785–803. <https://doi.org/10.1002/job>
- Peterson, S. J., & Luthans, F. (2003). The positive impact and development of hopeful leaders. *Leadership & Organization Development Journal*, 24(1), 26–31. <https://doi.org/10.1108/01437730310457302>
- Peterson, S. J., Luthans, F., Avolio, B. J., Walumbwa, F. O., & Zhang, Z. (2011). Psychological capital and employee performance: A latent growth modeling approach. *Personnel Psychology*, 64(2), 427–450. <https://doi.org/10.1111/j.1744-6570.2011.01215.x>
- Petticrew, M., & Roberts, H. (2006). *Frontmatter, in Systematic Reviews in the Social Sciences: A Practical Guide.* Blackwell Publishing Ltd, Oxford, UK. <https://doi.org/10.1002/9780470754887.fmatter>

- Quan, J., & Cha, H. (2010). IT certifications, outsourcing and information systems personnel turnover. *Information Technology & People*, 23(4), 330–351. <https://doi.org/10.1108/09593841011087798>
- Rao, T. V., & Abraham, E. (1986). Human resource development: Practices in Indian industries: A trend report. *Management & Labour Studies*, 11(2), 73–85.
- Rego, A., Sousa, F., Marques, C., & Cunha, M. P. e. (2012). Authentic leadership promoting employees' psychological capital and creativity. *Journal of Business Research*, 65(3), 429–437. <https://doi.org/http://dx.doi.org/10.1016/j.jbusres.2011.10.003>
- Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance, 53(3), 617–635.
- Robertson, I. T., & Cooper, C. L. (2010). Full engagement: the integration of employee engagement and psychological well-being. *Leadership & Organization Development Journal*, 31(4), 324–336. <https://doi.org/10.1108/01437731011043348>
- Robinson, D., Perryman, S., & Hayday, S. (2004). *The drivers of employee engagement*. Institute of Employment Studies (IES). <https://doi.org/IES> Report No. 408.
- Rojon, C., McDowall, A., & Saunders, M. N. (2011). On the experience of conducting a systematic review in industrial, work, and organizational psychology: Yes, it is worthwhile. *Journal of Personnel Psychology*, 10(3), 1–19.
- Roman, K. C. (2011). *Assessing talent management within the Western Cape provincial treasury (WCPT)*. Doctoral dissertation, Stellenbosch: University of Stellenbosch.
- Roman, N. V., & Frantz, J. M. (2013). The prevalence of intimate partner violence in the family: A systematic review of the implications for adolescents in Africa. *Family Practice*, 30(3), 256–265. <https://doi.org/10.1093/fampra/cms084>

- Rothmann, S. (2008). Job satisfaction, occupational stress, burnout and work engagement as components of work-related wellbeing. *SA Journal of Industrial Psychology*, 34(3), 11–16. <https://doi.org/10.4102/sajip.v34i3.424>
- Rothmann, S., & Jordaan, G. M. . (2006). Job demands, Job resources and Work engagement of academic staff in South African higher education institutions. *SA Journal of Industrial Psychology*, 32(4), 87–96.
- Rothmann, S., & Rothmann Jr, S. (2010). Factors associated with employee engagement in South Africa. *SA Journal of Industrial Psychology*, 36(2), 1–12. <https://doi.org/10.4102/sajip.v36i2.925>
- Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. JOHN WILEY & SONS. <https://doi.org/10.1002/9780470316696>
- Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67. <https://doi.org/10.1006/ceps.1999.1020>
- Ryan, R. M., & Deci, E. L. (2003). On assimilating identities to the self: A self-determination theory perspective on internalization and integrity within cultures. In *Handbook of self and identity* (In M. R. L, pp. 253–272). New York, NY, US: Guilford Press.
- Ryff, C. D., & Singer, B. (2003). Flourishing under fire: Resilience as a prototype of challenged thriving. *Flourishing: Positive Psychology and the Life Well-Lived*, 15–36.

- Şahin, R. D., Çubuk, D., & Uslu, T. (2014). The effect of organizational support, transformational leadership, personnel empowerment, work engagement, performance and demographical variables on the factors of psychological capital. *EMAJ: Emerging Markets Journal*, 3(3), 1–17. <https://doi.org/10.5195/EMAJ.2014.49>
- Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21(7), 600–619. <https://doi.org/10.1108/02683940610690169>
- Saks, A. M. (2008). The meaning and bleeding of employee engagement: How muddy is the water? *Industrial and Organizational Psychology*, 1(1), 40–43. <https://doi.org/10.1111/j.1754-9434.2007.00005.x>
- Salanova, M., Agut, S., & Peiró, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: the mediation of service climate. *The Journal of Applied Psychology*, 90(6), 1217–1227. <https://doi.org/10.1037/0021-9010.90.6.1217>
- Samuel, M. O. (2017). *Human capital retention: Developing and validating a structural model of selected antecedents of intention to quit*. Doctoral Dissertation, Stellenbosch University.
- Saunders, M., Lewis, P., & Thornhill, A. (2015). *Research methods for business students (7th Edition)*. Pearson United Kingdom.
- Schaufeli, W. (2013). What is engagement? In C. Truss, K. Alfes, R. Delbridge, A. Shantz, & E. Soane (Eds.), *Employee Engagement in Theory and Practice*. London: Routledge.
- Schaufeli, W. B., & Bakker, A. B. (2003). UWES Utrecht Work Engagement Scale Preliminary Manual. *Journal of Occupational Health Psychology*, 1(November), 58. <https://doi.org/10.1037/t01350-000>

- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behaviour*, 25(3), 293–315. <https://doi.org/10.1002/job.248>
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66(4), 701–716. <https://doi.org/10.1177/0013164405282471>
- Schaufeli, W. B., Salanova, M., Gonzales-Roma, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3, 71–92. <https://doi.org/10.1023/A:1015630930326>
- Schaufeli, W. B., & Taris, T. W. (2014). A Critical Review of the Job Demands-Resources Model: Implications for Improving Work and Health. In *Bridging Occupational, Organizational and Public Health: A Transdisciplinary Approach* (pp. 43–68). <https://doi.org/10.1007/978-94-007-5640-3>
- Schaufeli, W. B., Taris, T. W., & Van Rhenen, W. (2008). Workaholism, burnout, and work engagement: Three of a kind or three different kinds of employee well-being? *Applied Psychology*, 57(2), 173–203. <https://doi.org/10.1111/j.1464-0597.2007.00285.x>
- Scheier, M., & Carver, C. (1985). Optimism, coping, and health: assessment and implications of generalized outcome expectancies. *Health Psychology*, 4(3), 219–247.
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67(6), 1063–1078. <https://doi.org/10.1037/0022-3514.67.6.1063>
- Schmitt, N., & Stults, D. M. (1985). Factors defined by negatively keyed items: the result of careless respondents? *Applied Psychological Measurement*, 9(4), 367–373. <https://doi.org/10.1177/014662168500900405>

- Schneider, B. (1975). Organizational Climates: an Essay. *Personnel Psychology*, 28(4), 447–479. <https://doi.org/10.1111/j.1744-6570.1975.tb01386.x>
- Schneider, B., & Reichers, A. (1983). On the Etiology of Climates. *Personnel Psychology*, 36(1), 19–39.
- Schneider, S. L. (2001). In search of realistic optimism. Meaning, knowledge, and warm fuzziness. *The American Psychologist*, 56(3), 250–263. <https://doi.org/10.1037/0003-066X.56.3.250>
- Schrock, W. A., Hughes, D. E., Fu, F. Q., Richards, K. A., & Jones, E. (2016). Better together: Trait competitiveness and competitive psychological climate as antecedents of salesperson organizational commitment and sales performance. *Marketing Letters*, 27(2), 351–360. <https://doi.org/10.1007/s11002-014-9329-7>
- Schuh, S. C., Zhang, X. an, & Tian, P. (2013). For the good or the bad? Interactive effects of transformational leadership with moral and authoritarian leadership behaviors. *Journal of Business Ethics*, 116(3), 629–640. <https://doi.org/10.1007/s10551-012-1486-0>
- Schulte, M., Ostroff, C., & Kinicki, A. J. (2006). Organizational climate systems and psychological climate perceptions: A cross-level study of climate-satisfaction relationships. *Journal of Occupational and Organizational Psychology*, 79(4), 645–671. <https://doi.org/10.1348/096317905X72119>
- Schumacker, R. E., & Lomax, R. G. (2016). *A beginner's guide to structural equation modeling*. (Fourth). Routledge, New York.
- Schwarzer, R., Bäßler, J., Kwiatek, P., Schröder, K., & Zhang, J. X. (1997). The assessment of optimistic self-beliefs: Comparison of the German, Spanish, and Chinese versions of the general self-efficacy scale. *Applied Psychology*, 46(1), 69–88. <https://doi.org/10.1111/j.1464-0597.1997.tb01096.x>

- Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. *Measures in Health Psychology: A User's Portfolio. Causal and Control Beliefs*, 35–37.
<https://doi.org/10.1007/s13398-014-0173-7.2>
- Sekaran, U. (2001). *Research methods for business: A skills building approach. 2nd Edition.* John Wiley and Sons , Inc. , New York .
- Seligman, M. E. P. (1999). The president's address. *American Psychologist*, 54(8), 559–562.
- Seligman, M. E. P. (2002). Positive psychology, positive prevention, and positive therapy. *Handbook of Positive Psychology*, 2, 3–12.
<https://doi.org/10.1017/CBO9781107415324.004>
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5–14. <https://doi.org/10.1037/0003-066X.55.1.5>
- Serrano, S. A., & Reichard, R. J. (2011). Leadership strategies for an engaged workforce. *Consulting Psychology Journal Practice and Research*, 63(3), 176–189.
<https://doi.org/10.1037/a0025621>
- Shaleh, A. R., & Azwar, S. (2015). Personal Factors as a Predictor of Lecturer's Performance. *IJABER*, 13(7), 6019–6034.
- Shaleh, A. R., Azwar, S., & Hidayat, R. (2015). Personal Factors as a Predictor of Lecturer's Performance. *IJABER*, 13(7), 6019–6034.
- Shamian, J., O'Brien-Pallas, L., Thomson, D., Alksnis, C., & Steven Kerr, M. (2003). Nurse absenteeism, stress and workplace injury: what are the contributing factors and what can/should be done about it?. *International Journal of Sociology and Social Policy*, 23(8/9), 81–103. <https://doi.org/10.1108/09574090910954864>
- Shamir, B., & Eilam, G. (2005). "What's your story?" A life-stories approach to authentic leadership development. *Leadership Quarterly*, 16(3), 395–417.
<https://doi.org/10.1016/j.leaqua.2005.03.005>

- Shu, C.-Y. (2015). The Impact of Intrinsic Motivation on The Effectiveness of Leadership Style towards on Work Engagement. *Contemporary Management Research*, 11(4), 327–350. <https://doi.org/10.7903/cmr.14043>
- Shuck, B., & Herd, a. M. (2012). Employee engagement and leadership: Exploring the convergence of two frameworks and implications for leadership development in HRD. *Human Resource Development Review*, 11(2), 156–181. <https://doi.org/10.1177/1534484312438211>
- Shuck, B., & Jr, T. G. R. (2014). Employee engagement and well-being : A moderation model and implications for practice. *Journal of Leadership & Organizational Studies*, 21(1), 43–58. <https://doi.org/10.1177/1548051813494240>
- Shuck, B., Reio Jr, T. G., & Rocco, T. S. (2011). Employee engagement: An examination of antecedent and outcome variables. *Human Resource Development International*, 14(4), 427–445.
- Shuck, B., & Wollard, K. (2010). Employee engagement and HRD: A seminal review of the foundations. *Human Resource Development Review*, 9(1), 89–110. <https://doi.org/10.1177/1534484309353560>
- Simon, M. K., & Goes, J. (2013). *Ex Post Facto Research (Doctoral dissertation)*. Includes excerpts from Simon & Goes (2013), *Dissertation and Scholarly Research*. Recipes for Success . Seattle, WA: Dissertation Success LLC. Retrieved from www.dissertationrecipes.com
- Simons, J. H., & Buitendach, J. H. (2013). Psychological capital, work engagement and organizational commitment amongst call centre employees in South Africa. *SA Journal of Industrial Psychology*, 39(2), 1–12. <https://doi.org/10.4102/sajip.v39i2.1071>
- Siong, M. B. Z., Mellor, D., Moore, K. A., & Firth, L. (2006). Predicting intention to quit in the call centre industry: does the retail model fit? *Journal of Managerial Psychology*, 21(3), 231–243. [https://doi.org/10.1675/1524-4695\(2008\)31](https://doi.org/10.1675/1524-4695(2008)31)

- Siu, O. L., Bakker, A. B., & Jiang, X. (2014). Psychological capital among university students: relationships with study engagement and intrinsic motivation. *Journal of Happiness Studies*, 15(4), 979–994. <https://doi.org/10.1007/s10902-013-9459-2>
- Siu, O. L., Hui, C. H., Phillips, D. R., Lin, L., Wong, T. wai, & Shi, K. (2009). A study of resiliency among Chinese health care workers: Capacity to cope with workplace stress. *Journal of Research in Personality*, 43(5), 770–776. <https://doi.org/10.1016/j.jrp.2009.06.008>
- Skinner, E. A., Kindermann, T. A., & Furrer, C. J. (2009). A motivational perspective on engagement and disaffection. *Educational and Psychological Measurement*, 69(3), 493–525. <https://doi.org/10.1177/0013164408323233>
- Snyder, C. R. (2000a). *Handbook of hope : theory, measures & applications*. Academic Press. Retrieved from [https://books.google.co.za/books?hl=en&lr=&id=2KHRRaqqxTMC&oi=fnd&pg=PP2&dq=Snyder,+2000&ots=4D-bWKRQAQ&sig=aTmmKH-Bs9Uh8wke7_tBt8Wb2XQ#v=onepage&q=Snyder%2C 2000&f=false](https://books.google.co.za/books?hl=en&lr=&id=2KHRRaqqxTMC&oi=fnd&pg=PP2&dq=Snyder,+2000&ots=4D-bWKRQAQ&sig=aTmmKH-Bs9Uh8wke7_tBt8Wb2XQ#v=onepage&q=Snyder%2C%202000&f=false)
- Snyder, C. R. (2000b). The past and possible futures of hope. *Journal of Social and Clinical Psychology*, 19(1), 11–28. <https://doi.org/10.1521/jscp.2000.19.1.11>
- Snyder, C. R. (2002). Hope theory : Rainbows in the mind. *Psychological Inquiry*, 13(4), 249–275.
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. X., ... Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology*, 60(4), 570–585. <https://doi.org/10.1037/0022-3514.60.4.570>
- Snyder, C. R., Irving, L. M., & Anderson, J. R. (1991). Hope and health. In *Handbook of social and clinical psychology: The health perspective* (pp. 285–305). <https://doi.org/10.1037/0022-3514.60.4.570>

- Snyder, C. R., Sympson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. a, & Higgins, R. L. (1996). Development and validation of the state hope scale. *Journal of Personality and Social Psychology*, 70(2), 321–335. <https://doi.org/10.1037/0022-3514.70.2.321>
- Solaja, O. M., & Ogunola, A. A. (2016). Leadership style and multigenerational workforce: A call for workplace agility in Nigerian public organizations. *International Journal of African and Asian Studies Journal*, 21, 46–56.
- Soni, K., Rastogi, R., & Garg, P. (2016). Positive psychology at work: Psychological capital as a pathway to employee engagement. *HR Journal*, 7(2), 1–15.
- Sonnentag, S. (2003). Recovery, work engagement, and proactive behaviour: A new look at the interface between nonwork and work. *Journal of Applied Psychology*, 88(3), 518–528. <https://doi.org/10.1037/0021-9010.88.3.518>
- Sousa-poza, A., & Henneberger, F. (2004). Analyzing job mobility with job turnover intentions: An international comparative study. *Journal of Economic Issues*, 38(1), 113–137.
- Sousa-Poza, A., & Henneberger, F. (2002). Analyzing job mobility with job turnover intentions : An international comparative study. In *Forschungsinstitut für Arbeit und Arbeitsrecht*. (pp. 1–28). <https://doi.org/10.1080/00213624.2004.11506667>
- Sparrowe, R. T. (2005). Authentic leadership and the narrative self. *The Leadership Quarterly*, 16(3), 419–439. <https://doi.org/10.1016/j.leaqua.2005.03.004>
- Spence, J. T., & Robbins, a S. (1992). Workaholism: definition, measurement, and preliminary results. *Journal of Personality Assessment*. https://doi.org/10.1207/s15327752jpa5801_15
- Spink, K. S., Wilson, K. S., Brawley, L. R., & Odnokon, P. (2013). The perception of team environment: The relationship between the psychological climate and members' perceived effort in high-performance groups. *Group Dynamics: Theory, Research, and Practice*, 17(3), 150.

- Stajkovic, A. D., & Luthans, F. (1998a). Going beyond traditional motivational and behavioural approaches. *Organizational Dynamics*, 26(4), 62–74. [https://doi.org/10.1016/S0090-2616\(98\)90006-7](https://doi.org/10.1016/S0090-2616(98)90006-7)
- Stajkovic, A. D., & Luthans, F. (1998b). Self-efficacy and work-related performance : A meta-analysis. *Psychological Bulletin*, 124(2), 240–261.
- Stander, F. W., De Beer, L. T., & Stander, M. W. (2015). Authentic leadership as a source of optimism, trust in the organization and work engagement in the public health care sector. *SA Journal of Human Resource Management*, 13(1), 1–13. <https://doi.org/10.4102/sajhrm.v13i1.675>
- Stander, M. W., & Rothmann, S. (2010). Psychological empowerment, job insecurity and employee engagement. *SA Journal of Industrial Psychology*, 36(1), 1–8. <https://doi.org/10.4102/sajip.v36i1.849>
- Stevens, J. P. (2012). *Applied multivariate statistics for the social sciences*. Routledge.
- Stone, G. A., Russell, R. F., & Patterson, K. (2004). Transformational versus servant leadership: a difference in leader focus. *Leadership & Organization Development Journal*, 25(4), 349–361. <https://doi.org/10.1108/01437730410538671>
- Sun, T., Zhao, X. W., Yang, L. B., & Fan, L. H. (2012). The impact of psychological capital on job embeddedness and job performance among nurses: a structural equation approach. *Journal of Advanced Nursing*, 68(1), 69–79.
- Sundaray, B. K. (2011). Employee engagement: A driver of organizational effectiveness. *European Journal of Business and Management*, 3(8), 53–60.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Allyn & Bacon/Pearson Education, New York.
- Terry, R. W. (1993). *Authentic leadership: Courage in action*. San Francisco: Jossey-Bass Publishers (6th ed.). San Francisco: Jossey-Bass Publishers.

- Tett, R. P., & Meyer, J. P. (1993). Job satisfaction, organizational commitment, turnover intention, and turnover: Path analyses based on meta-analytical findings. *Personnel Psychology, 46*(2), 259–293. <https://doi.org/10.1111/j.1744-6570.1993.tb00874.x>
- Thompson, K. R., Lemmon, G., & Walter, T. J. (2015). Employee engagement and positive psychological capital. *Organizational Dynamics, 44*(3), 185–195. <https://doi.org/10.1016/j.orgdyn.2015.05.004>
- Tian-Foreman, W. (Amy). (2009). Job satisfaction and turnover in the Chinese retail industry. *Chinese Management Studies, 3*(4), 356–378. <https://doi.org/10.1108/17506140911007503>
- Tims, M., Bakker, A. B., & Xanthopoulou, D. (2011). Do transformational leaders enhance their followers' daily work engagement? *Leadership Quarterly, 22*(1), 121–131. <https://doi.org/10.1016/j.leaqua.2010.12.011>
- Towers Perrin. (2003). *Working today: Understanding what drives employee engagement: The 2003 Towers Perrin talent report.*
- Tuzun, I. K., & Kalemci, R. A. (2012). Organizational and supervisory support in relation to employee turnover intentions. *Journal of Managerial Psychology, 27*(5), 518–534. <https://doi.org/10.1108/02683941211235418>
- Ucho, A., Mkavga, T., & Onyishi, I. E. (2012). Job satisfaction, gender, tenure, and turnover intentions among civil servants in Benue State. *Interdisciplinary Journal of Contemporary Research in Business, 3*(11), 378–387.
- Vallabh, M. A., & Donald, F. (2001). A comparison of black and white managers on intent to leave and job mobility. *SA Journal of Industrial Psychology*
Journal of Industrial Psychology.
- van Beek, I., Taris, T. W., & Schaufeli, W. B. (2011). Workaholic and work engaged employees: Dead ringers or worlds apart? *Journal of Occupational Health Psychology, 16*(4), 468–482. <https://doi.org/10.1037/a0024392>

- Van der Colff, J. J., & Rothmann, S. (2009). Occupational stress, sense of coherence, coping, burnout and work engagement of registered nurses in South Africa. *SA Journal of Industrial Psychology*, 35(1), 1–10. <https://doi.org/10.4102/sajip.v35i1.423>
- Van Der Vaart, L., Stander, M., & Rothmann, S. (2016). The validation of the authentic leadership inventory (ALI). In *Area, North-West University, Vanderbijlpark, South Africa email:* (p. 6).
- Van Der Westhuizen, N. (2014). *Turnover intention and employee engagement: Exploring eliciting factors in South African audit firms. Doctoral dissertation, Stellenbosch: Stellenbosch University.*
- Van Vianen, A. E. M., De Pater, I. E., Bechtoldt, M. N., & Evers, A. (2011). The strength and quality of climate perceptions. *Journal of Managerial Psychology*, 26(1), 77–92. <https://doi.org/10.1108/02683941111099637>
- Vandenberg, R. J., & Nelson, J. B. (1999). Disaggregating the motives underlying turnover intentions: When do intentions predict turnover behaviour? *Human Relations*, 52(10), 1313–1336.
- Vansteenkiste, M. (2005). *Intrinsic versus extrinsic goal promotion and autonomy support versus control: Facilitating performance, persistence, socially adaptive functioning and well-being.* Phd Dissertation, Katholieke Universiteit Leuven (Belgium).
- Velnampy, T. (2008). Job Attitude and Employees Performance of Public Sector Organizations in Jaffna District , Sri Lanka. *GITAM Journal of Management*, 6(2), 66–73.
- Verbeke, W., Volgering, M., & Hessels, M. (1998). Exploring the conceptual expansion within the field of organizational behaviour: Organizational culture. *Journal of Management Studies*, 35(3), 303–329. <https://doi.org/10.1111/1467-6486.00095>
- Vieira, A. L. (2011). *Interactive LISREL in practice. Getting started with a SIMPLIS approach.* (S. S. & B. Media., Ed.). Springer Science & Business Media.

- Vink, J., Ouweneel, E., & le Blanc, P. (2011). Psychological resources for engaged employees: Psychological capital in the job demands-resources model. *Gedrag En Organisasie*, 24(2), 101–120. Retrieved from <http://www.scopus.com/inward/record.url?eid=2-s2.0-80052454213&partnerID=tZOtx3y1>
- Virga, D., & Paveloni, A. (2015). Psychological capital and well-being: The moderating role of psychological detachment from work. *Psihologia Resurselor Umane*, 13(1), 53–62. Retrieved from <http://pru.apio.ro/index.php/prujournal/article/view/418>
- Vogt, K., Hakanen, J. J., Brauchli, R., Jenny, G. J., & Bauer, G. F. (2015). The consequences of job crafting: a three-wave study. *European Journal of Work and Organizational Psychology*, 25(3), 353–362. <https://doi.org/10.1080/1359432X.2015.1072170>
- Volpone, S. D., Avery, D. R., & McKay, P. F. (2012). Linkages between racioethnicity, appraisal reactions, and employee engagement. *Journal of Applied Social Psychology*, 42(1), 252–270. <https://doi.org/10.1111/j.1559-1816.2011.00877.x>
- Von Hagel, W. J., & Miller, L. A. (2011). Precipitating events leading to voluntary employee turnover among information technology professionals. *Journal of Leadership Studies*, 5(2), 14–33. <https://doi.org/10.1002/jls>
- Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement*, 1(2), 165–78. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/7850498>
- Walker, J. (2009). *A Transformational analysis of leadership in Shakespeare's Henry V*.
- Walumbwa, F., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management*, 34(1), 89–126. <https://doi.org/10.1177/0149206307308913>

- Walumbwa, F., Avolio, B. J., & Hartnell, C. A. (2010). An investigation of the relationships among leader and follower psychological capital, service climate and job performance. *Personnel Psychology*, 63, 937–963. <https://doi.org/10.1111/j.1744-6570.2010.01193.x>
- Walumbwa, F., Wang, P., Wang, H., Schaubroeck, J., & Avolio, B. J. (2010). RETRACTED: Psychological processes linking authentic leadership to follower behaviours. *Leadership Quarterly*, 21(5), 901–914. <https://doi.org/10.1016/j.leaqua.2010.07.015>
- Wang, D.-S., & Hsieh, C.-C. (2013). The effect of authentic leadership on employee trust and employee engagement. *Social Behaviour and Personality*, 41(4), 613–624. <https://doi.org/10.2224/sbp.2013.41.4.613>
- Wang, H., Sui, Y., Luthans, F., Wang, D., & Wu, Y. (2014). Impact of authentic leadership on performance: Role of followers' positive psychological capital and relational processes. *Journal of Organizational Behaviour*, 35, 5–21. <https://doi.org/10.1002/job>
- Wang, & Bird, J. (2011). Multi-Level Modeling of the Principal Authenticity and Teachers' Trust and Engagement. *Academy of Educational Leadership Journal*, 15(4), 125–148. Retrieved from <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:MULTI-LEVEL+MODELING+OF+PRINCIPAL+AUTHENTICITY+AND+TEACHERS'+TRUST+AND+ENGAGEMENT#0>
- Wefald, A. J., & Downey, R. G. (2009a). Construct dimensionality of engagement and its relation with satisfaction. *The Journal of Psychology*, 143(1), 91–112. <https://doi.org/10.3200/JRLP.143.1.91-112>

- Wefald, A. J., & Downey, R. G. (2009b). Job engagement in organizations: Fad, fashion, or folderol? *Journal of Organizational Behaviour*, 30(1), 141–145. <https://doi.org/10.1002/job.560>
- Welch, J. (2015). The only three measurements that matter. Retrieved from <http://www.brandintegrity.com/blog/three-measurements-matter/>
- Wheeler, A. R., Gallagher, C. V., Brouer, R. L., & Sablynski, C. J. (2007). When person-organization (mis)fit and (dis)satisfaction lead to turnover. *Journal of Managerial Psychology*, 22(2), 203–219. <https://doi.org/10.1108/02683940710726447>
- Wijhe, C. van, Peeters, M., Schaufeli, W., & Hout, M. van den. (2011). Understanding workaholism and work engagement: the role of mood and stop rules. *Career Development International*, 16(3), 254–270. <https://doi.org/10.1108/13620431111140156>
- Wilson, S. J., Lipsey, M. W., & Derzon, J. H. (2003). The effects of school-based interventions programs on aggressive behaviour: A meta-analysis. *Journal of Consulting and Clinical Psychology*, 71(1), 136–149.
- Wingerden, J. van, Bakker, A. B., & Derks, D. (2016). A test of a job demands-resources intervention. *Journal of Managerial Psychology*, 31(3), 686–701. <https://doi.org/10.1108/JMP-03-2014-0086>
- Witt, L. A. (2013). Developing dedicated service employees. *Journal of Psychological Issues in Organizational Culture* Witt, L. A. (2013)., 4(2), 35–52. <https://doi.org/10.1002/jpoc.21113>
- Wollard, K. K., & Shuck, B. (2011). Antecedents to employee engagement. *Advances in Developing Human Resources*, 13(4), 429–446. <https://doi.org/10.1177/1523422311431220>

- Wolters, C. A. (2004). Advancing achievement goal theory: Using goal structures and goal orientations to predict students' motivation, cognition, and achievement. *Journal of Educational Psychology, 96*(2), 236–250. <https://doi.org/10.1037/0022-0663.96.2.236>
- Wong, C. a., Spence Laschinger, H. K., & Cummings, G. G. (2010). Authentic leadership and nurses' voice behaviour and perceptions of care quality. *Journal of Nursing Management, 18*(8), 889–900. <https://doi.org/10.1111/j.1365-2834.2010.01113.x>
- Wong, W. C., Cheung, C. S., & Hart, G. J. (2008). Development of a quality assessment tool for systematic reviews of observational studies (QATSO) of HIV prevalence in men having sex with men and associated risk behaviours. *Emerging Themes in Epidemiology, 5*(23), 3–6. <https://doi.org/10.1186/1742-7622-5-23>
- Woods, C. M. (2006). Careless responding to reverse-worded items: Implications for confirmatory factor analysis. *Journal of Psychopathology and Behavioural Assessment, 28*(3), 189–194. <https://doi.org/10.1007/s10862-005-9004-7>
- Woolley, L., Caza, A., & Levy, L. (2011). Authentic leadership and follower development. *Journal of Leadership & Organizational Studies, 18*(4), 438–448. <https://doi.org/10.1177/1548051810382013>
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management, 14*(2), 121–141. <https://doi.org/10.1037/1072-5245.14.2.121>
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behaviour, 74*(3), 235–244. <https://doi.org/10.1016/j.jvb.2008.11.003>

- Yammarino, F. J., Dionne, S. D., Schriesheim, C. A., & Dansereau, F. (2008). Authentic leadership and positive organizational behaviour: A meso, multi-level perspective. *Leadership Quarterly*, 19(6), 693–707. <https://doi.org/10.1016/j.leaqua.2008.09.004>
- Yin-Fah, B. C., Foon, Y. S., Chee-Leong, L., & Osman, S. (2010). An exploratory study on turnover intention among private sector employees. *International Journal of Business and Management*, 5(8), 57–64. <https://doi.org/10.5539/ijbm.v5n8p57>
- You, J. W. (2016). The relationship among college students' psychological capital, learning empowerment, and engagement. *Learning and Individual Differences*, 49, 17–24. <https://doi.org/10.1016/j.lindif.2016.05.001>
- Youssef, C. M., & Luthans, F. (2005). Resiliency development of organizations, leaders and employees: Multi-level theory building for sustained performance. Authentic leadership theory and practice: Origins, effects and development. In *Authentic leadership theory and practice: Origins, effects and development* (pp. 303–343).
- Youssef, C. M., & Luthans, F. (2007). Positive organizational behaviour in the workplace: The impact of hope, optimism, and resilience. *Journal of Management*, 33(5), 774–800. <https://doi.org/10.1177/0149206307305562>
- Youssef, C. M., & Luthans, F. (2011). Positive psychological capital in the workplace: Where we are and where we need to go. In *Designing positive psychology: Taking stock and moving forward* (pp. 351–364).
- Yuan, Q., Liu, S., Tang, S., & Zhang, D. (2014). Happy@Work: protocol for a web-based randomized controlled trial to improve mental well-being among an Asian working population. *BMC Public Health*, 14, 685. <https://doi.org/10.1186/1471-2458-14-685>
- Yukl, G. (2008). How leaders influence organizational effectiveness. *Leadership Quarterly*, 19(6), 708–722. <https://doi.org/10.1016/j.leaqua.2008.09.008>

- Zamahani, M., Ghorbani, V., & Rezaei, F. (2011). Impact of authentic leadership and psychological capital on followers' trust and performance. *Australian Journal of Basic & Applied Science*, 5(12), 658–667.
- Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: the influence of psychological empowerment, intrinsic motivation, and creative process engagement. *The Academy of Management Journal*, 24(5), 107–128. <https://doi.org/10.1108/dlo.2010.08124ead.007>
- Zhong, X. N., Li, X., Liu, T., & Chen, Y. W. (2016). The mediator role of psychological capital : A study among authentic leadership, work engagement, and psychological capital. In *Industrial Engineering and Engineering Management (IEEM), 2016 IEEE International Conference* (pp. 1861–1865).



Section A:
Demographical Information

Age

| | |
|--------------|---|
| Less than 20 | 1 |
| 20 – 30 | 2 |
| 31 – 40 | 3 |
| 41 – 50 | 4 |
| 51 – 60 | 5 |
| 61 and above | 6 |

Gender

| | |
|--------|---|
| Female | 1 |
| Male | 2 |

Race

| | |
|----------|---|
| Black | 1 |
| White | 2 |
| Coloured | 3 |
| Asian | 4 |

Highest Level of Education completed

| | |
|----------------------------|---|
| Primary | 1 |
| Secondary | 2 |
| Matric | 3 |
| Bachelor's Degree | 4 |
| Honours | 5 |
| Master's Degree | 6 |
| PhD | 7 |
| Other/prefer not to answer | 8 |

Length of Employment

| | |
|--------------------|---|
| Below 1 year | 1 |
| 1 – 2 years | 2 |
| 2 – 3 years | 3 |
| 3 – 4 years | 4 |
| 4 – 6 years | 5 |
| 6 – 8 years | 6 |
| 8 – 10 years | 7 |
| 11 – 15 years | 8 |
| 15 years and above | 9 |

Department in my Organization

| | |
|------------------------|---|
| Finance/Accounting | 1 |
| Human Resources | 2 |
| Information Technology | 3 |
| Administration | 4 |
| Sales/Marketing | 5 |
| Research & Development | 6 |
| Manufacturing | 7 |
| Engineering | 8 |
| Other | 9 |

My Position in my Organization

| | |
|-----------------------------------|---|
| Independent/Hired | 1 |
| Employee (no management position) | 2 |
| Operational Manager | 3 |
| Middle Manager | 4 |
| Top Manager | 5 |

Please proceed to the next set of questions.
Remember to read the instructions carefully before you begin