

**DETERMINANTS OF WORK-LIFE CONFLICT AND ITS ROLE IN BURNOUT
AMONG NURSING STAFF**

Tilani du Preez

*Thesis presented in partial fulfilment of the requirements for the degree of Master of
Commerce (Industrial Psychology) in the Faculty of Economic and Management
Sciences at Stellenbosch University*



SUPERVISOR: PROF DJ MALAN

March 2017

DECLARATION

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

Signed: Tilani du Preez

Date: March 2017

ABSTRACT

The occupation of nursing is a high risk, high pressure, and labour-intensive profession in the Health Care system. The Health Care system is important for the well-being of the society, therefore it is vital for nursing practitioners to provide quality care to the society. The nursing shortage in South Africa is a problem, in both the private and public health sectors. Some of the challenges that nurses may experience daily is a shortage of resources and staff, illegitimate tasks, emotional distress, poor co-worker performance and poor management. All these demanding factors may be linked to the burnout syndrome, which is especially evident in occupations that support people, like nursing. Nurses are consequently leaving SA to work overseas for better working conditions and pay.

The Job Demands-Resources model was used as a model to identify the variables that contribute to work-life interference and burnout. This study considered certain job demands (role overload and emotional labour) and job resources (organisational support and work-life culture), as well as family demands (care-giving responsibilities) and a family resources (marital satisfaction), that may have an effect on the level of work-life interference and burnout among nurses. Psychological Capital was also considered as a personal resource that may have an effect on the levels of work-life interference and burnout experienced. All these variables were identified as possible factors that may explain why variance in work-life conflict exists and the impact it has on the levels of burnout among nurses.

The ex post facto survey study took place in one of the largest private hospitals in South Africa, situated in Bloemfontein. Quantitative data was collected with a self-compiled and self-administrated questionnaire on all the variables that were hypothesised to have an effect on the variance in work-life conflict under the nurses. A non-probability sample of 106 nursing staff members, who were in a long-term relationship and/or married, participated in the study. The self-compiled questionnaire consisted of psychometric instruments that were selected for inclusion based on their psychometric properties. The following measurements were included: Survey Work-Home Interaction Nijmegen instrument; Job Demands-Resource Scale; Copenhagen Burnout Inventory; Psychological Capital Questionnaire; Emotional Labour Scale;

ENRICH (Enriching and Nurturing Relationship Issues, Communication and Happiness) Marital Satisfaction Scale (EMS) and a work-life culture scale.

An ex post facto correlational design was used to test the formulated hypotheses in this research study. Of the eight main effect hypotheses, only four hypotheses were supported, namely hypotheses 1, 2, 3 and 12, whereas hypotheses 4, 5, 9 and 10 were not supported. In the case of the moderating effects only one hypothesis was supported, namely hypothesis 13, which dealt with PsyCap as a moderator of the relationship between role overload and work-life conflict. Hypotheses 15, 16 and 17 tested the mediating effects in this study, and only two of the three mediating paths were found to be significant. Work-life conflict mediated the relationship between role overload and burnout, and also between emotional labour and burnout. The findings of this study contribute to the body of knowledge regarding the antecedents of work-life interference and how it is related to burnout among nurses, as well as to the body of knowledge regarding the healthcare system.

The results indicate that nurses do experience work-life conflict and burnout, and also elucidated the fact that their job resources, job demands, and personal resources should be regarded as malleable and appropriate targets of managerial interventions.

OPSOMMING

Die verpleegkundige beroep is bekend as 'n hoë risiko, hoë druk, en arbeidsintensiewe professie binne die gesondheidsorgsisteem. Die gesondheidsorgsisteem is belangrik vir die welsyn van die samelewing, daarom is dit noodsaaklik vir die verpleërs om gehalte sorg te verskaf aan die gemeenskap se lede. Die tekort aan verpleegsters is in Suid-Afrika 'n probleem, in beide die private-en openbare gesondheidssektore. Sommige van die uitdagings wat verpleegsters daagliks ervaar is 'n tekort aan hulpbronne en personeel, nie-legitieme take, emosionele nood, swak medewerkerprestasies en swak bestuur. Al hierdie veeleisende faktore kan gekoppel word aan die sindroom van uitbranding, wat veral sigbaar is in beroepe, soos verpleging, wat ander mense versorg. Verpleegsters verlaat gevolglik SA om oorsee te gaan werk vir beter werksomstandighede en betaling.

Die model van werkseise en hulpbronne (*Job Demand-Resource model*) is gebruik om die veranderlikes te identifiseer wat 'n invloed op werkslewekonflik (*work-life conflict*) en uitbranding (*burnout*) het. Die studie het op s-ekere veranderlikes gefokus soos werkeise (roloorklading en emosionele arbeid) en werks-hulpbronne (organisasoriese ondersteuning en werkslewe-kultuur), sowel as familie-eise (soos familie verantwoordelikhede) en familie-hulpbronne (huweliksbevrediging), wat 'n effek op die werkslewe-konflik onder die verpleegsters mag hê. Sielkundige kapitaal (*Psychological capital*) is ook oorweeg as 'n persoonlike hulpbron wat 'n effek op werkslewe-konflik en uitbranding kan hê. Al hierdie veranderlikes is geïdentifiseer as moontlike faktore wat kan verklaar waarom daar variansie in die werkslewe-konflik bestaan en wat die impak daarvan op die vlakke van uitbranding onder verpleegsters is.

'n Ex post facto opnamestudie is onderneem in een van die grootste private hospitale in Bloemfontein, Suid-Afrika. Die studie het gebruik gemaak van kwantitatiewe data wat deur middel van 'n self-saamgestelde en self-gedadministreerde vraelys ingesamel is, wat uit al die veranderlikes bestaan wat hipoteties 'n invloed op die variansie in die werkslewe-konflik en uitbranding onder verpleegsters kan hê. 'n Gerieflikheidssteekproef van 106 verpleërs wat in 'n langtermyn verhouding en/of getroud was, het aan die studie deelgeneem. Die self-saamgestelde vraelys het uit verskillende psigometriese instrumente bestaan wat gekies is op grond van hulle goeie psigometriese eienskappe. Die volgende instrumente is ingesluit: *Survey Work-Home*

Interaction Nijmegen instrument; Job Demands-Resource Scale; Copenhagen Burnout Inventory; Psychological Capital Questionnaire; Emotional Labour Scale; ENRICH (Enriching and Nurturing Relationship Issues, Communication and Happiness) Marital Satisfaction Scale (EMS) en 'n werk-lewe-kultuurvraelys.

'n *Ex post facto* korrelasie-ontwerp is gebruik om die geformuleerde hipoteses in hierdie studie te toets. Van die agt hipoteses oor die hoofeffekte (*main effects*), is ondersteuning vir slegs vier van die hipoteses gevind, naamlik hipoteses 1, 2, 3 en 12, daarteenoor is hipoteses 4, 5, 9 en 10 nie ondersteun nie. In die geval van die modererende (*moderated*) effekte is net een hipotese ondersteun, naamlik hipotese 13, wat verwys na die modererende invloed van sielkundige kapitaal op die verband tussen roloorklading en werk-lewe-konflik. Hipoteses 15,16 en 17 het die bemiddelende (*mediation*) effekte in hierdie studie getoets, en slegs twee van die drie bemiddelende paaie (*mediating paths*) is beduidend bevind, naamlik werk-lewe-konflik wat 'n bemiddelende rol in die verband tussen roloorklading en uitbranding, asook tussen emosionele arbeid en uitbranding gespeel het. Die bevindinge van hierdie studie dra by tot die kennisbasis rakende die voorspellers van werkslewe-konflik en uitbranding onder verpleërs, asook die kennisbasis van die gesondheidsorgstelsel.

Die resultate dui daarop dat verpleegsters werkslewe-konflik en uitbranding ervaar, en dat werks hulpsbronne, werkseise, en persoonlike hulpsbronne as smeebaar beskou behoort te word en as toepaslike teikens vir bestuursintervensies.

ACKNOWLEDGEMENTS

First and foremost, I would like to thank my Heavenly Father. Thank you God for providing me with strength throughout my academic career. Thank you for guiding me throughout the ups and downs and showing me what I am capable to do.

To Prof Malan, thank you so much for all your guidance, support and for encouraging me in the right directions. Thank you for always being available for any query, regardless of the time of day.

Prof Martin Kidd, thank you for your guidance and patience in assisting me with the data analyses and processing.

To the hospital and Elsabé I would like to express gratitude for your time, patience and cooperation with collecting my data.

To Mom and dad, ... where to begin? Thank you for giving me the opportunity to follow one of my dreams, and for giving me the opportunity to get educated in my field. Thank you for always reminding me to start working on this study and pushing me in times of need. There are not enough words in this world that could describe my gratitude towards you guys. You made this academic journey definitely worth the while.

To my sister, Liandi and brother, Wian. Thank you that I could always count on you, and thanks for sympathising with me throughout my journey.

Piet Rautenbach, thank you for just being you, from the bottom of my heart I appreciate your continuous love and support.

My dearest friends, thank you very much for all your love, support and for making this study a lot easier.

TABLE OF CONTENTS

CHAPTER 1	1
INTRODUCTION.....	1
1.1 INTRODUCTORY REMARKS.....	1
1.2 PROBLEM STATEMENT	4
1.3 RESEARCH INITIATING QUESTION	8
1.4 OUTLINE OF THE STRUCTURE OF THE PROPOSAL	9
CHAPTER 2	10
LITERATURE OVERVIEW	10
2.1 WORK-LIFE CONFLICT (WLC).....	10
2.1.1 The Nature of Work-Life Conflict.....	10
2.1.2 The Causes of Work-Life Conflict	11
2.1.3 The Negative Consequences of Work-Life Conflict	13
2.2 LINKING WORK-LIFE CONFLICT AND BURNOUT	15
2.2.1 The Nature of Burnout	15
2.2.2 The Causal Factors Leading to Burnout.....	16
2.3 JOB-DEMANDS RESOURCES MODEL.....	20
2.3.1 An Overview of the Job Demands Related to Work-Life Conflict	21
2.3.1.1 Role-ambiguity	22
2.3.1.2 Role overload	23
2.3.1.3 Work-life culture.....	24
2.3.1.4 Time spent at work.....	26
2.3.1.5 Emotional labour.....	27
2.3.2 An Overview of the Job Resources related to Work-Life Conflict.....	28
2.3.2.1 Job autonomy	30
2.3.2.2 Social support	31
2.3.2.3 Family-friendly policies and practices	33
2.3.3 The Interaction between the Job Demands and Job Resources	35
2.4 FAMILY DEMANDS AND RESOURCES	37
2.4.1 An Overview of the Family Demands of Work-Life Conflict.....	38
2.4.1.1 Societal expectations.....	38
2.4.1.2 Care-giving responsibilities	39
2.4.2 An Overview of the Family Resources applicable to Work-Life Conflict.....	40

2.4.2.1	Marital satisfaction/support	41
2.4.2.2	Family support	43
2.4.3	The Interaction between the Family Demands and Family Resources	44
2.5	PERSONAL RESOURCES	45
2.5.1	An Overview of the Role of Personal Resources in Work-Life Conflict	46
2.5.1.1	Personality	47
2.5.1.2	Psychological capital (PsyCap)	48
2.5.1.3	The HERO construct.....	49
2.5.2	The Impact Personal Resources has on Work-Life Conflict.....	52
2.6	THE THEORETICAL MODEL AND THE STRUCTURAL MODEL	55
2.6.1	Theoretical model.....	55
2.6.2	The structural model	55
2.7	SUMMARY	57
CHAPTER 3.....		59
RESEARCH METHODOLOGY.....		59
3.1	INTRODUCTION.....	59
3.2	STRUCTURAL MODEL	59
3.3	SUBSTANTIVE RESEARCH HYPOTHESES	60
3.4	RESEARCH DESIGN.....	62
3.5	SAMPLING PROCEDURE	64
3.5.1	Sample Size	64
3.6	MEASURING INSTRUMENTS	66
3.6.1	Demographic Data	66
3.6.2	Work-life Conflict	66
3.6.2.1	Nature, composition and administration of the measurement.....	66
3.6.2.2	Psychometric properties of the SWING	67
3.6.3	Job Demand-Resource Scale (JDRS)	68
3.6.3.1	Nature, composition and administration of the measurement.....	68
3.6.3.2	Psychometric properties of JDRS.....	68
3.6.4	Copenhagen Burnout Inventory (CBI).....	69
3.6.4.1	Nature, composition and administration of the measurement.....	69
3.6.4.2	Psychometric properties of CBI.....	70
3.6.5	Psychological Capital.....	70
3.6.5.1	Nature, composition and administration of the measurement.....	70

3.6.5.2	Psychometric properties of PCQ.....	71
3.6.6	Emotional Labour Scale (ELS).....	71
3.6.6.1	Nature, composition and administration of the measurement.....	72
3.6.6.2	Psychometric properties of ELS.....	72
3.6.7	Marital Satisfaction.....	72
3.6.7.1	Nature, composition and administration of the measurement.....	73
3.6.7.2	Psychometric properties of ENRICH Marital Satisfaction Scale.....	73
3.6.8	Work-life Culture.....	74
3.6.8.1	Nature, composition and administration of the measurement.....	74
3.6.8.2	Psychometric properties of Work-life Culture Scale.....	74
3.7	MISSING VALUES.....	75
3.8	DATA ANALYSIS.....	75
3.8.1	Psychometric Analysis.....	76
3.8.2	Structural Equation Modelling (SEM).....	78
3.8.2.1	Partial Least Squares (PLS) SEM analysis.....	78
3.9	ETHICAL CONSIDERATIONS.....	80
3.10	SUMMARY.....	81
CHAPTER 4	82
RESULTS	82
4.1	INTRODUCTION.....	82
4.2	EVALUATING THE MEASUREMENT MODEL.....	82
4.2.1	Item Analysis.....	82
4.2.1.1	Work-life conflict.....	84
4.2.1.2	Burnout.....	84
4.2.1.3	Psychological capital.....	85
4.2.1.4	Emotional labour.....	85
4.2.1.5	Marital satisfaction.....	85
4.2.1.6	Work-life culture.....	86
4.2.1.7	Decision regarding the reliability of the scales.....	86
4.2.2	Correlation Analysis.....	86
4.3	PARTIAL LEAST SQUARES ANALYSIS (PLS-SEM).....	87
4.3.1	Evaluation of the Measurement Model.....	87
4.3.1.1	Outer loadings.....	89
4.3.2	Evaluation of the Structural Model.....	92

4.3.2.1 The Degree of Multicollinearity	92
4.3.2.2 Evaluation of the R ²	93
4.3.2.3 Evaluation and interpretation of the main effects.....	93
4.3.2.4 Evaluation and interpretation of the proposed moderating hypotheses	98
4.3.2.5 Evaluation and interpretation of the proposed mediating hypotheses.....	105
4.4 CHAPTER SUMMARY	109
CHAPTER 5.....	111
DISCUSSION AND RECOMMENDATIONS.....	111
5.1 DISCUSSION OF THE RESULTS.....	111
5.2 MANAGERIAL IMPLICATONS OF THE RESULTS	117
5.2.1 Reducing Job Demands (Organisational Level Intervention)	117
5.2.2 Increasing Personal Resources (Organisational Level Intervention)	119
5.2.3. Individual Interventions.....	121
5.3 LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH.....	122
5.4 CHAPTER SUMMARY	125
REFERENCES	126

LIST OF TABLES

Table 3.1 Summary of Latent Variables.....	60
Table 3.2 Biographical Information of the Sample Population (N=106).....	65
Table 4.1 Means, Standard Deviations, and Internal Consistency Reliabilities of Subscales.....	83
Table 4.2 Means, Standard Deviations, and Internal Consistency Reliabilities of Scales.....	83
Table 4.3 Reliability Statistics of the PLS Model.....	88
Table 4.4 Reliability of the Formative Construct- Care Giving Responsibilities	89
Table 4.5 Outer Loadings.....	90
Table 4.6 R Squared Values for Endogenous Values.....	93
Table 4.7 Path Coefficients between Variables of Inner Model.....	94
Table 4.8 Interaction Effect, R ² change and P-values for the Moderating Effects.....	99
Table 4.9 Moderating Path Coefficients.....	99
Table 4.10 The Interaction Effects of the Mediating Relationship of SEM.....	106
Table 4.11 The Interaction Effects of the Mediating Relationship of the Sobel Test.....	106

LIST OF FIGURES

Figure 2.1 WFC Role Pressure Incompatibilities	13
Figure 2.2 The Interaction Effects between Job Demands and Job Resources	37
Figure 2.3 Theoretical Model Underlying this Research Study.	55
Figure 2.4 Structural Model Depicting the Most Salient Variables Impacting upon WLC and its Effect on Burnout.....	56
Figure 3.1 Structural Model of Work-Life Conflict and its Role in Burnout.....	59
Figure 4.1: Structural Model with Path Coefficients.....	109

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTORY REMARKS

International changes and developments, such as globalisation and changes in technology, place a lot of pressure on South African organisations to perform constantly to the international standard. A new era of cyber time (as a result of the use of laptops, cell phones and tablets) has become a reality in organisations, leading to more work-life conflict due to unnatural time pressures on the employees to perform. These global challenges influence organisations by raising their expectations regarding their employees' time, performance and energy (Soni, 2013). The results of these changes are that an employee will have greater job demands and less time for non-work activities due to the globalisation and communication technology (Malan, 2008; Soni, 2013). Time pressures, such as longer working hours may influence the employee's management strategies to balance the demands of family and work life. This will create stress among employees, and stress has a direct and indirect cost for both the employee and organisation (Ram, Khoso, Shah, Chandio & Shaikih, 2011). The changes in the working environment; the increased employment of women; the reality of dual couple earners, and the individual's desire to enjoy free time, are all factors that combine to create new work-life balance challenges (Cegarra-Leiva, Sa'nchez-Vidal & Cegarra-Navarro, 2012).

The human resource management sections of organisations have increasingly focused upon work-life balance challenges during the past two decades (Stock, Bauer & Bieling, 2013). Research studies on work-life balance show that work-life balance is not only important to a specific group of employees, but that it has an impact at different organisational levels and with respect to different family structures (De Villiers & Kotze, 2003). Organisations today are increasingly trying to improve their employees' work-life balance and well-being by implementing family-friendly policies (Stock et al., 2013). Work-life balance can be defined as having equal or balanced involvement, effort and time spent on various roles; as a result of which employees

will be satisfied in both their employment and personal roles (Greenhaus, Collins & Shaw, 2003).

Work-life balance is a challenge that is being studied worldwide (Carlier, Llorente & Grau, 2011). A study conducted by Carlier et al. (2011) shows that in a comparison between Spanish and Latin American organisations, Spanish organisations are doing better in their policies to help their employees manage their work and personal life than the Latin Americans. In the year 2000 Spain started to take action to help their companies to ensure work-life balance. They employed national legislation in an effort to support work-life balance in their companies (Carlier et al., 2011). In contrast, in a South African study conducted by Royal (2013), over half of the employees complained that their companies do not help them to maintain work-life balance. According to De Villiers and Kotze (2003), South African companies show an increased demand for time, energy and work commitment from their employees. An employee survey conducted in 2002 (after a problem arose with employees struggling to find a balance between work and family life in a multinational petroleum company in Cape Town) showed that there was no improvement with respect to the organisation's work-life balance policies compared to the situation in 2000 (De Villiers & Kotze, 2003).

Work-life balance also encompasses conflict dimensions, so it is important to take note of the negative consequences of work-life conflict that an individual may experience (Aryee, Srinivas & Tan, 2005). Work-life conflict can be experienced if the person does not succeed in balancing his roles at work and family effectively (Mitchelson, 2009). Work-life conflict symptoms that an employee may experience include feelings of stress and exhaustion, and it may contribute to lower organisational performance (Stock et al., 2013). Work-life conflict also contributes to a low level of job and life satisfaction (Mitchelson, 2009). Other studies refer to depression, anxiety disorders, substance disorders and physical health problems as consequences of work-life conflict (Mitchelson, 2009). The research of Ten Brummelhuis and Van der Lippe (2010) has shown that employees who experience work-life conflict have higher levels of burnout and lower levels of organisational commitment. In today's workplace, burnout is seen as a serious problem. Burnout represents about forty percent of the work-related problems that employees experience as a result of work-related stress. Some employees are able to deal with stress as a normal part of life; whereas other

employees' health gets affected in their attempts to manage uncontrollable stress. In Canada it was found that one in every four workers has mental problems due to burnout. The direct cost consequences that burnout has on an organisation are high personnel turnover, low productivity, high absenteeism, lack of decision-making, lack of motivation, dissatisfaction at work, which may all contribute to a negative organisational image if the organisation chooses to ignore the problem of burnout (Simard, n.d.).

The concept *work-life conflict* is described by some authors in terms of the conflict female employees experience between the demands of their work and their family roles (Underhill, 2005). It is, however, not limited to females, nor is it limited to people with family responsibilities. Studies by Tiedje and colleagues (Rantanen, Kinnunen, Mauno & Tilleman, 2011) found that women who experience high role conflict usually show more depressed symptoms. The traditional role expectations a society holds, is that men will be more active in the work role and women will be more active in the family role (Higgins, Duxbury & Lyons, 2010). Aryee et al. (2005) stated that men will, in general, experience more work overload and women more parental role overload, in accordance with the prevailing gender expectations the society has. Therefore organisational support will tend to enhance men's work-life balance to a greater extent (Aryee et al., 2005). In today's workforce, however, women are also actively involved in the working role, which leads to the domestic chores being shared with men and this puts more pressure on both men and women to find balance in their life (Carlier et al., 2011).

Work-life conflict can have a negative spill-over effect, from family roles interfering with work roles (FIW), to work roles interfering with family roles (WIF) (Schmidt, 2011). Role conflict at work is manifested as role overload (which is when an employee has many things to do, but not enough time to do everything), and role ambiguity (when an employee has a lack of information regarding the work requirements), and an organisational culture that does not support work-life balance policies will lead to work-life conflict (Aryee et al., 2005). A person's marital status, how many children they have, and whether they have to care for elderly family members are examples of life roles that may be challenging (Schmidt, 2011). Work-life conflict has a number of organisational and individual consequences, as mentioned above, including stress, burnout, depression, somatic health problems, lower marital satisfaction, job

dissatisfaction, poor job performance and increased absenteeism (Aryee et al., 2005; Schmidt, 2011).

Personality plays an important role in work and life conflict (Aryee et al., 2005). Neuroticism, where an individual is fearful of novel situations, was found to correlate positively with both FIW and WIF (Mitchelson, 2009). The personality trait of perfectionism is related to emotional exhaustion in work-life conflict (Mitchelson, 2009). Optimism, where an individual is positive and can cope with stressful situations, is associated with lower levels of work-life conflict (Mitchelson, 2009).

Recently the focus has shifted to positive interactions between family and work roles (Rantanen et al., 2011). Organisations have moved towards a focus on programmes that create more flexibility for employees, and give their employees the autonomy to manage their work-life balance (Stock et al., 2013). When an organisation utilises the family-friendly policies mentioned above, it enhances the employee's job-attitudes, commitment and the productivity (Stock et al., 2013). It also reduces the health care costs for an organisation (Casey & Grzywacz, 2008). According to Stock et al. (2013) family-friendly programmes may assist the organisation in recruiting a much wider range of employees. Work-life balance could be said to contribute to an individual's psychological well-being, for example, they will have a higher self-esteem, higher sense of fulfilment and an increased sense of understanding their different life roles (Rantanen et al., 2011). This implies that an organisation has a moral obligation towards their employees to improve their quality of life in the workplace, to improve the employees' satisfaction, and maximise their productivity in the organisation (Cherry, n.d.).

It can therefore be concluded that work-life conflict is an important concept, both for an individual and the organisation. If an organisation is able to control the work-life conflict problem, it will not only contribute to the organisation's success but also to the well-being of the employee. Thus, family-friendly policies are very important to consider if the company has problems with work-life conflict.

1.2 PROBLEM STATEMENT

Burnout is a syndrome that is linked to occupations that support other people. The nursing profession is an excellent example of such a profession. When a nurse is burnt

out, he/she can lose focus on their job and make fatal errors; therefore it is important to handle burnout under nurses. In a study conducted by Lin (2013) it was found that role conflict leads to higher levels of emotional exhaustion and depersonalisation under nurses. They also found that job autonomy has a limited negative effect on emotional exhaustion, while a lack of social support will lead to nursing practitioners experiencing burnout (Lin, 2013). Some of the stressors related to the work environment that nurses must deal with, are modern technology, high work load, endangering their own lives, role conflict, role ambiguity, lack of autonomy and exposure to the possibility of making mistakes (Van der Colff & Rothmann, 2009). As discussed above, nursing is a high risk, high pressure, and labour-intensive profession in the health care system. The health care system is important for the well-being of society, therefore it is vital to have nursing practitioners who are able to provide quality care to society.

The health care sector of South Africa consist of private and public health care systems. The private sector's objective is to make profit and provide quality health care services to the citizens of South Africa. Currently about 38% of nurses is working in the private sector. The private sector also gains economical value through international linkages, but this may also lead to an extra burden on the health professionals to provide quality health care to the citizens of SA (Econex, 2013). The most basic type of health care that is free of charge is associated with the public sector. The nurse-to-population ratio in the public sector has dropped from 149 professional/register nurses per 100 000 population in 1998, to 110 professional/register nurses per 100 000 population in 2007, which is an indication of the inadequate supply of nurses in the public sector. Issues that are of concern in the public sector is a lack of training, lack of support and a lack of managerial capacities (Schaay, Sanders & Kurger, 2011).

According to the Health Systems Trust (n.d.), it is estimated that every month 300 nurses are leaving South Africa, and they are leaving for better pay and working condition overseas. Nurses can get up to double their salary overseas (Health Systems Trust, n.d.). Despite this the South Africa Nursing Council showed growth in the nursing register over the period of 2005 to 2014. The category known as Registered Nurse/Registered Midwife displayed a growth of 33 593 practitioners (+34%); the next category namely Enrolled Nurse/Enrolled Midwife increased with 29

833 practitioners (+81%), and the last category, known as the Enrolled Nursing Auxiliary category increased with 15 769 practitioners (+29%). The overall growth of nurses in the register was 79 168 (+41%) during this period. During this period the SA population has grown by 15%, from 46.888 million to 54.002 million people (SA Nursing Council, *Growth in the Registers*, n.d.). Therefore it is important to attract and retain competent nurses in South Africa.

Despite both the sectors having their own problems, nurses from both these sectors are experiencing challenging work conditions in a stressful work environment. In both these sectors nurses experience common stressors, such as a lack of organisational support, staff shortages, and fellow employees doing their work poorly. Inadequate remuneration is also an issue in private hospitals, making it difficult to maintain their living standards at home.

The job demands of nurses lead to stress. Job demands in the nursing profession include administrative duties, the demands from patients and the health risk of becoming infected by a patient. In SA this is very relevant with regard to the high prevalence of HIV and AIDS among patients (Van der Colff & Rothmann, 2009). The high prevalence of HIV infected individuals in SA puts a further burden on the public health sectors, leading to an increase in demand for health care services.

Moonlighting can also be an antecedent explaining the high job stress nurse practitioners may have. Professor Leatitia Rispel (Cameron, 2013) reported that 34% of the 3700 nurses she interviewed in SA where moonlighting (working as nurses for an extra job/income), and 60% of them where exhausted by the extra working hours. It was found that nurses in the adult ICU did extra work through different nursing agencies. It was reported in Rispel's research that moonlighting were more prevalent in the private sector (42%) than the public sector (27%). Thus moonlighting is an additional source of stress that may be causing burnout under the nurses.

The nursing profession could be described as associated with high emotional and physical demands, and having a high prevalence of burnout. In Canada, graduate nurses have higher levels of burnout, and this problem has been found to be significantly related to a lack of support, a high workload and absenteeism (Spence Laschinger & Fida, 2014). The challenging working conditions, like the long working hours of nurses and the double shifts; may lead to more stress and to nurses being

more prone to experience work-life conflict. The work-life conflict nurses experience is associated with low job satisfaction and high levels of work overload. The nursing profession is female dominated, that is why it is important to look at work-life conflict, because despite having a full-time job, they, traditionally, still have certain family responsibilities to fulfil. The demanding working hours and the high involvement with their patients create stress under nurses, therefore work-life conflict can be seen as a challenge for the nursing profession (Hanif & Raza Naqvi, 2014).

An American survey found that over half of the nurses in the study were not able to spend the time they would have liked to with their family, because of their work obligations. When the nurses were asked what domain interfered the most, the results showed that work-life interferes more with the family-life, than vice versa. The results showed that half of the nurses reported a chronic interference (1 day a week or more) from work to family life and 41% nurses reported an episodic interference (less than monthly or 1-3 days per month). With regard to the family interfering with the work life, only 11% communicated chronic interference and 52% communicated episodic interference (HRM Guide, n.d.). Work interference has a direct influence on family life, especially in the case of female nurses. A study conducted with female nurses confirmed that family life does not interfere with work life as much as work life interferes with family life (Jennings, 2008).

However, not every nurse who experiences high workload, such as long working hours and high job demands, will experience work-life conflict. This indicates that there are some factors buffering the effect of stress and burnout on work-life conflict. Social support may be one of these factors, as social support is regarded as an asset contributing to an individual's well-being. Supervisor support, as well as family support, is an important source of coping with work-life conflict (Yildirim & Ayca, 2008). This provides evidence that some nurses will, in spite of being exposed to high job demands, cope better in a stressful working environment than others. In spite of experiencing stress, these nurses will have high levels of engagement in their work. Engagement refers to a "positive, fulfilling, work-related state of mind that is characterised by three dimensions, namely vigour, dedication and absorption" (Van der Colff & Rothmann, 2009, p.3). Vigour can be seen as high levels of energy and resilience with respect to one's work. A sense of significance and pride refers to dedication, and absorption is characterised by finding it difficult to detach oneself from

one's work. Engagement could be conceptualised as at the opposite end of a continuum culminating in burnout (Van der Colff & Rothmann, 2009).

The support the nursing practitioners receive from their family and/or workplace may help them to regain self-efficacy (Lin, 2013). Self-efficacy is one of the positive constructs of Psychological Capital (PsyCap). In research studies PsyCap has been suggested to work as a buffer against work stressors in the nursing environment. Avey, Luthans and Jensen (cited in Spence Laschinger & Fida, 2014) found that an individual that has high levels of PsyCap, has lower stress levels and is unlikely to leave their job. Luthans and Jensen's (Spence Laschinger & Fida, 2014) study was the first that linked the concepts PsyCap and burnout to nurses. They found that PsyCap mitigates the effect of the negative working conditions of nurses, and that PsyCap was significantly associated with lower levels of burnout. A study on Chinese nurses found that PsyCap had a preventive (negative) effect on burnout. It showed that when a nurse is hopeful, optimistic, and has endurance and adaptability, then they will have a minimal chance of experiencing burnout (Peng et al., 2013). Based upon these findings regarding PsyCap, it is reasonable to suggest that PsyCap is a personal resource that may mitigate the negative effects in a workplace, such as burnout, stress and work-life conflict.

1.3 RESEARCH INITIATING QUESTION

The argument presented thus far motivates the necessity of gaining a valid understanding on why some nursing professionals have the ability to cope well with work and family demands/conflict, and balances it with the aid of the resources that are available to them. Increasing our understanding of the behaviour of working man through scientific research, essentially involves formulating a research initiating question, theorising and empirically testing the hypotheses developed through theorising in response to the research initiating question. The argument presented thus far culminates in the research initiating question of **why variance in work-life conflict and the impact thereof on burnout exists amongst nurses working in the same organisational contexts/hospital in South Africa.**

1.4 OUTLINE OF THE STRUCTURE OF THE PROPOSAL

Chapter 2 will contain the literature study. In this literature study the concept work-life conflict will be conceptualised. This chapter will lead to the derivation of a work-life conflict structural model. The research methodology chapter, Chapter 3, will be used to empirically test the structural model that was developed and presented in Chapter 2's literature study. Chapter 4 will be used to explore the statistical analyses of the results in depth. In Chapter 5 the managerial implications of the findings; the research limitations, and recommendations for future research will be discussed.

CHAPTER 2

LITERATURE OVERVIEW

Over the past 25 years, research on work-life balance has increased significantly (Carlier et al., 2011). Working people tend to experience conflict between the work and family responsibilities they have to attend to (Aryee et al., 2005). According to Greenhaus and Beutell (Aryee et al., 2005, p.132) work-life conflict can be defined as: “a form of inter-role conflict in which role pressures from the work and family domains are mutually incompatible in some respect”. Work-life conflict has become more of a complex issue in the modern society, because there are dual-earning couples, single working parents and children who support their elderly parents or relatives (Siu, 2013).

It is therefore important to know how people deal with this conflict and succeed in balancing their work and life demands.

2.1 WORK-LIFE CONFLICT (WLC)

Work-life conflict refers to the work and life domains that collide with one another and exceed the resources that are necessary for an individual to thrive (Rantanen, Kinnunen, Feldt & Pulkkinen, 2008).

The phenomenon of work-life interference has become more complex, given the increased prevalence of dual earners, single working employees with children and the work and family domain challenges that employees face daily (Mesmer-Magnus & Viswesvaran, 2005). This is, however, not a new concern, as the study of the interdependence of workers' life and their jobs has already commenced in the 1970's (Ojha, 2011). In this study work-life interferences refers to the negative interferences from work and home life, thus the term work-life interference will be regarded similar as to work-life conflict. These two terms will be used interchangeably throughout the study.

2.1.1 The Nature of Work-Life Conflict

According to Ten Brummelhuis and Van der Lippe (2010) a person experiences work-life conflict when there are increasing responsibilities to fulfil at home and more job expectations in the workplace. According to Mesmer-Magnus and Viswesvaran

(2006), the demands of each role include several responsibilities, duties, obligations, commitments and expectations which require several resources, such as time, energy, skills and support functions. When the compatibility between the demands and resources are in a state of imbalance, it has the potential to result in work-life conflict, otherwise referred to as work/non-work conflict or work-life imbalance.

Work and family are distinct domains of a person's life. The first domain is characterised by work-family conflict (WFC), this is when the work domain impedes performance in the family domain; the second domain is characterised by family-work conflict (FWC), this is when the family domain impedes performance in the work domain (Mesmer-Magnus & Viswesvaran, 2005). Mesmer-Magnus and Viswesvaran (2005) found in their study that WFC correlates more highly with job stressors than FWC, and FWC correlates more highly with non-work stressors than WFC.

2.1.2 The Causes of Work-Life Conflict

Role conflict theory provides a good explanation of the causes of work-life conflict. This theory's main assumption is that time and energy are two limited resources. Meaning that time and energy spent on the family life cannot be invested in the work life, and vice versa, and this can result in burnout. Thus when considering the role conflict theory, the relationship between the family and work life must be portrayed as a zero-sum game (Ten Brummelhuis, Van der Lippe, Kluwer & Flap, 2008).

This role conflict theory is also related to the negative spill over effect from home to work and vice versa. It is important to look at certain factors of the family life that have a negative spill over onto the working life. There has been a lot of research (Mesmer-Magnus & Viswevaran, 2005; Ten Brummelhuis et al., 2008) on the presence of children and work-life conflict, some researchers argue that having more children leads to more work-life conflict, other researchers argue that having young children under the age of 6 will lead to more work-life conflict. Other research stated that having a partner will help with work-life conflict, in contrast to those findings that claimed that single employees suffer in the same way from work-life conflict as married employees do. In addition to having children, caring for others, such as elderly and relatives, may also have a negative spill over from family life to work life (Schmidt, 2011; Ten Brummelhuis et al., 2008). Another factor is that the presence of women in the

workforce is increasing, making it difficult for a family to find the right balance among all the demands (Nadeem & Abbas, 2009).

It is also imperative to consider the factors of work life that may lead to a negative spill over onto family life. Research studies showed that time pressure from work may lead to a negative spill over to family life. Working hours may also contribute to this negative spill over effect (Schmidt, 2011).

In line with the role conflict theory, work-life conflict can also be seen as time-, strain- and behaviour based (Yardley, 2012). The first aspect is time-based demands; where something reduces the time available to the individual for the other domains they must pay attention to. Examples of this aspect can be paid working hours, supporting young children and family members that are ill, as well as household tasks to perform. The second aspect is strain-based demands; this has a spill over effect, where strain from one domain is carried over to another, affecting the second domain negatively. An example of this could be where an individual's bad experience at work (home) is carried over to home (work), it includes role overload and role conflict (Voydanhoff, 2005). Behaviour-based conflict is when a person cannot transpose a behaviour in one domain to another. An example will be when the behavioural role expectations in one role, like the warmth and nurturing needed in the family role, is in conflict with the work role, where self-reliance and aggressiveness may be required. If such an individual is unable to adapt to these conflicting behavioural role expectations, then conflict will appear between family and work life. These three types of conflict place a lot of role pressure on an individual. Thus the primary sources of work-life conflict is role conflict, role overload and role ambiguity; which will be explored in depth later on (Yardley, 2012).

Greenhaus and Beutell (1985) created a figure to illustrate how the roles of both the family and work life has an impact on an individual, as discussed above.

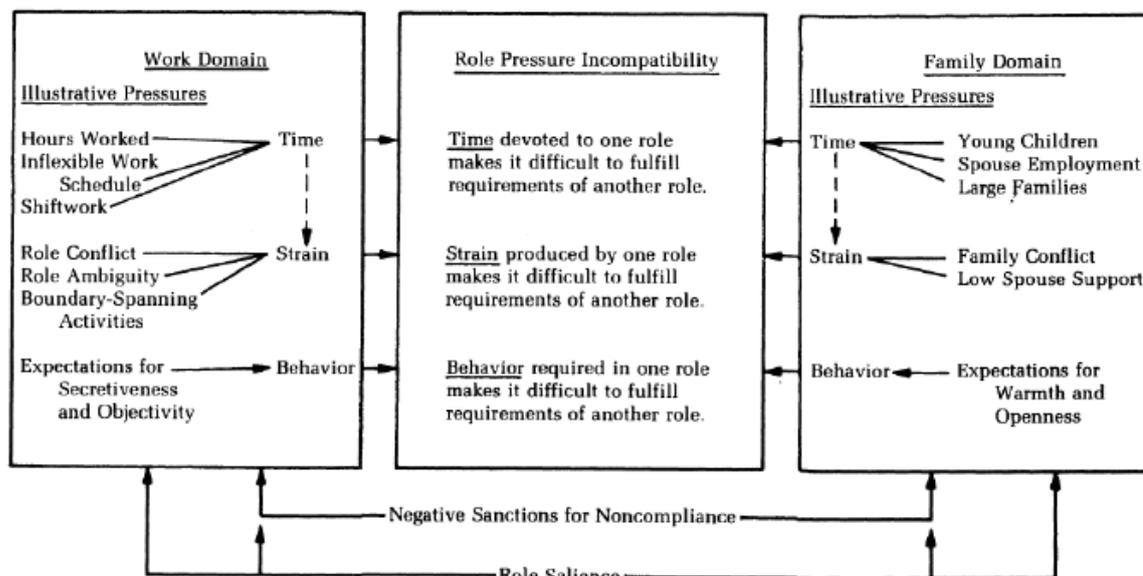


Figure 2.1. WFC Role Pressure Incompatibilities. Adapted from “Sources of conflict between work and family roles,” by J.H. Greenhaus and N.J. Beutell, 1985, *The Academy of Management Review*, 10(1), p. 78.

2.1.3 The Negative Consequences of Work-Life Conflict

Job demands, such as role conflict, role ambiguity and role overload, are primary sources of stress contributing to work-life conflict (Yardley, 2012). Emotional exhaustion can be created by the work overload associated with the work-life conflict a person may experience in various occupations. This is known as the health impairment process (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2007). Work-life conflict can affect the well-being of an individual, who does not effectively deal with the daily problems he/she is facing (Siddiqui, 2013).

Among the negative consequences of work-life conflict for the organisation are higher levels of burnout, lower levels of job satisfaction, lower performance levels, lower commitment towards their job, and higher levels of absenteeism (Mitchelson, 2009; Ten Brummelhuis & Van der Lippe, 2010). These negative individual consequences may also include higher levels of stress, lower life and marital satisfaction, increased levels of depression and health problems, such as hypertension and substance abuse (Mitchelson, 2009; Ten Brummelhuis & Van der Lippe, 2010). With today’s shift work being a common configuration, sleep difficulties can also be a problem that can affect the quality of an individual’s life (for example a woman working night shift have a higher

risk of developing breast cancer, ischemic stroke and endometrial cancer; it is, however, important to keep in mind that men are not immune to the deleterious effects of shift work) (Siddiqui, 2013).

These negative consequences have a negative effect on organisational commitment, because the lower levels of performance, increases the employees' intention to quit their job. The attendant low levels of job satisfaction will lead to burnout, and may result in the excessive use of alcohol and drugs as a way to deal with the work-life conflict (Siddiqui, 2013).

Everyday a nurse is confronted by feelings of grief, suffering and death. Despite this a nurse provides life-saving treatments to their patients and must be emotionally supportive towards them. Nurses that are confronted with a high workload and emotional labour may experience chronic stress. When nurses go home after work, they cannot switch off these feelings, and it may have negative consequences, such as sleep disturbance, which will affect their work and family life. According to Van der Heijden, Demerouti, Bakker and Hasselhorn (2008) work-life interference plays an intervening role between job demands and the health of a nurse. Due to the shortage of nursing staff it is imperative for nurses to pay attention to balancing the demands from work and home or deal with serious health consequences. Thus higher work demands and higher work-life interference may lead to health problems, and in turn, general health problems and higher job demands and work-life interference may further aggravate nurses' health, it is like a loss spiral effect. This may lead to more sick leave and absenteeism from work and finally nurses leaving the nursing profession (Heijden et al., 2008).

High burnout levels are evident under nurses, because of the highly physical and emotional demands required at work (Van der Colff & Rothmann, 2009). Physical demands can include the long working hours and shift work, making it difficult for the nurses to spend time with their family. Emotional demands, such as the death of a patient and caring for their patients can also lead to burnout under the nurse practitioners. As previously mentioned, it was also found that work-life interferes more with family-life, than family-life with work-life. If nurses are balancing their job and family responsibilities ineffectively and experience the negative spill over effect from one domain to another, they may experience stress and burnout. Wang, Chang, Fu

and Wang (2012) studied work-life conflict and burnout among Chinese nurses and found that high levels of work-life conflict are correlated with higher levels of personal burnout; and that both work-to-life interference and life-to-work interference are positively related to emotional exhaustion and cynicism under the female nurses of China.

Hypothesis 1: WLC has a significant positive relationship with burnout experienced by nurses.

2.2 LINKING WORK-LIFE CONFLICT AND BURNOUT

According to Georgias and Nikoloas (2012) Herbert Freudenberger developed the concept burnout in the 1970's and claimed that it is a worldwide problem among individuals. Shirom (2003) stated that burnout is a problem that is work-related and that research on burnout commenced already in the year 1982. Burnout is a symptom that is present in an individual who has been exposed to a highly stressful situation (Rothmann & Essenko, 2007).

2.2.1 The Nature of Burnout

Burnout is a term that can be described as: "a state of physical, emotional and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding" (Schaufeli & Greenglass, 2001, p. 501). Burnout is a serious/chronical work-related stress reaction (Pienaar & Van Wyk, 2006). Work demands, work overload and role conflict can be factors that lead to burnout under working individuals (Weiten, 2010). Burnout can be defined as: "a persistent, negative, work-related state of mind in 'normal' individuals that is primarily characterised by exhaustion, accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work" (Wiese, Rothmann & Storm, 2003, p. 71).

According to Maslach (Lamb, 2009) the definition of burnout encompasses three dimensions; namely emotional exhaustion, depersonalisation and reduced personal accomplishments. Emotional exhaustion leads to an individual experiencing higher levels of emptiness and carrying a burden of emotional demands. Emotional exhaustion has been linked to anxiety, tension and insomnia (Lamb, 2009).

The second dimension is depersonalisation. It is usually when employees distance themselves from their work and family life, and start treating other people like objects or numbers. Such a person will display a negative/cynical attitude towards other people, themselves and life (Lamb, 2009; Weiten, 2010).

The last dimension is reduced personal accomplishments. Brenninkmeijer and Van Yperen (Lamb, 2009) stated that reduced personal accomplishment refers to the negative feelings an individual experiences, instead of feelings of capability and successful accomplishments in one's work. These low levels of perceived competence can in return lead to feelings of helplessness (Lamb, 2009).

2.2.2 The Causal Factors Leading to Burnout

The job demands and job resources (JD-R) model proposes that burnout develops as a result of two processes. The first process is exposure to job demands that may lead to emotional exhaustion. These job demands may include physical workload, time pressure, the physical environment and shift work. As discussed earlier, emotional exhaustion is characterised by a feeling of chronic fatigue (Demerouti, Bakker, Nachreine & Schaufeli, 2001). Some of the organisational determinants that may lead to higher job demands are: too much work, interpersonal conflict, no control over responsibilities, loss of autonomy and inadequate recognition and rewards (Weiten, 2010). Also work-life conflict is a job demand, which may have an effect upon an individual's burnout experience, which may lead to negative consequences, such as withdrawal behaviour (Cheung, Tang & Tang, 2011).

Work-life conflict is a stressor that creates tension and higher levels of burnout, when the work responsibilities clash with the family responsibilities (Yardley, 2012). The negative spillover effect that happens when work-life conflict exists is strongly associated with developing job stress, emotional stress, as well as burnout (Hämmig, Brauchli & Bauer, 2012). Hämmig et al. (2012) found a strong relationship between work-life conflict and burnout. They found that hospital staff, like nurses and doctors, are in a stressful environment, and show increased burnout symptoms with an increased degree of work-life conflict. Thus their study revealed that work-life conflict is high risk factor for burnout under nurses and other hospital staff, which has a highly demanding job with long working hours (Hämmig et al., 2012).

The second process focusses on a situation where resources are lacking within the workplace. This may lead to withdrawal, then depersonalisation and finally to work disengagement. This depersonalisation leads to cynical attitudes at the workplace and home. A lack of job resources may include a lack of feedback, rewards, job security and job control (Demerouti et al., 2001). When studying the development of burnout, it is essential to consider the interaction effect between job demands and job resources (Demerouti et al., 2001). A combination of high job demands and a lack of job resources will increase the potential of burnout (Demerouti et al., 2001). The interaction between the job demands and job resources is explained later on in this study.

Some of the sources that create burnout in a workplace are the following: it may be factors that are unique to the job, such as workload, pace, variety, autonomy, working hours, the physical environment and isolation in the workplace. The characteristics of the organisation may also play a part in creating stress, such as role conflict, role ambiguity and when the level of responsibility of an employee is too high or too low. Another source that may lead to stress in the workplace is career development, like under/over-promotion, job security, and career development opportunities. Threats and harassment in the workplace may also lead to higher levels of stress and lastly the organisational structure, such as the management style and the level of participation in decision-making can have an effect on the employees' level of stress/burnout in the workplace (Simard, n.d.; Toppinen-Tanner, 2011).

Personalistic factors are also important to consider as a source of developing burnout. It is a known fact that a low level of job satisfaction is related to higher levels of emotional exhaustion and depersonalisation (Van der Colff & Rothmann, 2014). Job dissatisfaction and reduced self-efficacy, can lead to higher levels of cynicism. Some personality factors such as perfectionism, self-promotion, the inability to say "no", the unwillingness to share job demands, and having unrealistic expectations, can lead to burnout symptoms (Vorkapić & Mustapić, 2012). According to Theron (2005) personality is an important determinant of stress. An individual who has a type A personality, is a perfectionist, and has high levels of neuroticism (one of the big five personality traits), is more vulnerable to the symptoms of burnout (Pisarik, 2009; Stoeber & Rennert, 2008). Neuroticism and extraversion are two consistent predictors of burnout. Individuals with higher levels of neuroticism underestimate their self-

performance and experience strong emotions in a stressful situation, which will cause these individuals to be more vulnerable to burnout. The tendency to engage in intense personal interactions amongst extraverts may counteract depersonalisation, whereas optimism is expressed in increased feelings of personal accomplishments (Bakker, Van der Zee, Lewig & Dollard, 2002).

The nursing profession is an emotionally demanding profession, thus burnout is a common consequence in this profession. Nurses are seen as an occupational group with an above average risk for developing burnout, due to their highly stressful environment. Levert's, Lucas and Ortlepp's (2000) study confirmed that in SA psychiatric nurses have high levels of burnout, with 50% of the sample having high levels of emotional exhaustion and depersonalisation and 93.4% having low feelings of personal accomplishments (Van der Colff & Rothmann, 2014).

Research has indicated that various demographic factors contribute to the level of burnout experienced. Van der Colff and Rothmann (2014) stated that unmarried people are more likely to experience burnout, because of the lack of spousal support. Maslach, Schaufeli and Leiter's (2001) studies also confirm that people with a higher educational level will have more responsibilities, therefore are more prone to develop burnout. Van der Colff (2001) found that nursing students are more likely to experience burnout compared to working nurses. Interestingly enough, in the Potter et al. (2010) study it was found that nurses who had been in the profession for longer than 6 years had a higher risk for developing burnout than other occupation groups, and Afrikaans and English speaking nurses in the age interval of 20-30 showed a higher frequency of lower levels of perceived personal accomplishment and increased depersonalisation. The lower ranked nurses also showed lower levels of personal accomplishments than their fellow nurses with a higher rank (Van der Colff & Rothmann, 2014).

Thus the process of burnout occurs when there is a mismatch between employees and their work environment that causes high levels of stress. If the stressful situation is not solved, then there is no adjustment to the problem, leading to symptoms of burnout. Firstly feelings of emotional exhaustion will occur, then depersonalisation, and eventually a perceived loss of personal accomplishment. If the burnt-out individual

is left untreated, it may lead to other illnesses and effects, as described in the next section (Toppinen-Tanner, 2011).

2.2.3 The Negative Consequences of Burnout

The symptoms of burnout tend to develop subtly over a period of a few months (*Signs, symptoms, causes, and coping strategies*, n.d.). Lamb (2009) divided the symptoms of burnout in five categories. The first category is health-related symptoms, such as headache, back pain, tiredness and changes in dietary and sleeping patterns. Physical symptoms can also include a weak immune system, hyperventilation, high blood pressure, anxiety and depression (Lamb, 2009; Rothmann & Essenko, 2007).

The second category is behavioural symptoms. These symptoms include withdrawal, avoidance of responsibilities, isolation, frustration, and absenteeism and the use of food, drugs or alcohol to cope with burnout (*Signs, symptoms, causes, and coping strategies*, n.d.). Emotional exhaustion due to burnout may lead to cognitive problems, such as lack of concentration, attention deficits and forgetfulness (Carter, 2012).

The next category is relationship problems. Difficulties in interpersonal relationships occur among burnt out individuals (Lamb, 2009). Isolation symptoms occur among individuals who suffer from burnout and are characterised by withdrawal from interpersonal relationships with co-workers or family members (Carter, 2012). Individuals with burnout may be aloof and express cold feelings and be less patient with other individuals (Carter, 2012).

The fourth category is attitudinal problems, such as boredom, cynicism and feelings of distrust (Lamb, 2009). Burnout also leads to pessimistic feelings about one's life and an individual will feel that nothing good will happen (Carter, 2012). A loss of excitement in all areas of an individual's life emerges, as an individual begins to experience more stress (Carter, 2012).

The last category is emotional symptoms. Emotional symptoms include a sense of failure, self-doubt, lack of motivation, decreased satisfaction, and feelings of loneliness (*Signs, symptoms, causes, and coping strategies*, n.d.). Feelings of frustration and irritation also arise among individuals who experience burnout (Lamb, 2009). A

burnout victim becomes more anxious and often experiences severe anxiety, which may lead to panic attacks (Carter, 2012).

These symptoms of burnout lead to impaired work performance levels because of the negative attitudes and feelings associated with it (Toppinen-Tanner, 2011). According to Toppinen-Tanner (2011) sickness and absenteeism are the most common consequences of burnout. Parker and Kulik's (Toppinen-Tanner, 2011) study under nurses found that burnout led to more sick leave and absenteeism. Burnout may also lead to higher levels of turnover intention, which ultimately may lead to the organisation having to overspend on the training of the new employees (Lin, 2013).

2.3 JOB-DEMANDS RESOURCES MODEL

This model emphasises the importance of both the positive and negative indicators of the employee's well-being. It also looks at a wide range of working conditions. The assumption of this model is that in every occupation there are risk factors and facilitating factors that are classified under job demands and job resources. Job demands may exhaust a person's resources, leading to lower levels of energy and health problems. Job resources, in contrast, can enhance growth and lead to personal development (Yardley, 2012).

This model has two different underlying psychological processes that may lead to the development of job strain and motivation (Rothmann, Mostert & Strydom, 2006). For the development of job strain or motivation, it is important to consider the interaction between the two categories, namely job demands and job resources. Thus job demands are initiators of the health impairment process (excessive job demands and a lack of job resources), while the job resources facilitate work engagement and act like a buffering mechanism against the negative effects of the job demands, including burnout. There are different job resources that may buffer the impact of job demands in different working environments (Demerouti & Bakker, 2011). Thus the JD-R model process can be generalised to different organisational settings, although the job demands and job resources will differ in each occupation, yet the outcome will remain the same - either burnout or engagement will be present. The constructs of job demands and job resources will be explained in depth in the following sections.

2.3.1 An Overview of the Job Demands Related to Work-Life Conflict

Job demands refer to the physical, psychological, social and organisational aspects of a job that require cognitive and emotional skills to complete a task. High job demands can turn into stressors that may result in a person's long-term and short-term illness. Job demands can be high pressure, high work load, time pressure and lack of support from the organisation. High job demands can lead to exhaustion and, when there is a lack of job resources, it may lead to the experience of disengagement. This exhaustion and disengagement can lead to higher levels of burnout (Yardley, 2012).

Demands can develop from certain characteristics of the individual's work-life situation. Characteristics like the structure of their work, size of their family and the expectations the society has about their work and family life can influence the demands people are exposed to. There are two aspects, namely strain-based and time-based demands that may constrain the individual's efforts to succeed in one domain of life because of the characteristics that exists in the other domain of life (Voydanhoff, 2005).

These demands have a negative influence on well-being; as a result employees may experience higher levels of stress, depression and absenteeism from work and family life (Neal & Hammer, 2009). Demands on the individual, posed by their working environment, may include long working hours, travelling and being monitored intensely at work (Voydanoff, 2005). Work and life conflict increase the levels of burnout among people and they may also experience cognitive difficulties, such as a lack of concentration or staying alert (Beauregard & Henry, 2009). According to Petermann, Springer and Farnsworth (1995) they interviewed nurses and inferred that all of the registered nurses have similar job stressors. Time consuming procedures, which require nurses to do regular check-ups on their patients, the patient's rapidly deteriorating condition, high personal expectations the nurses have for themselves, and limited resources and staff shortages are all seen as job stressors. Other research showed that a lack of administrative support, inadequate salaries and staff shortages were major job stressors for nurses.

In the next section a few job demands that may lead to exhaustion, namely role ambiguity, role overload, work-life culture, time spent at work and emotional labour will be explored in detail

2.3.1.1 Role-ambiguity

Role-ambiguity can be described as a lack of information regarding the job requirements that must be performed. This issue of role-ambiguity has a positive relationship with stress and lower levels of performance among employees. Personal characteristics can contribute to the way a person experiences role-ambiguity. A person with an internal locus of control (they control their outcomes) will handle role-ambiguity better than a person with an external locus of control (fate controls their outcomes) (Ram et al., 2011).

In a study conducted by Soltani, Hajatpour, Khorram and Nejati (2013) it was found that role-ambiguity plays an important role in work-life conflict and the performance of an individual under conditions of greater levels of stress. Role ambiguity happens when the organisation's expectations are at variance with the employees' expectations about their job duties. This uncertainty about job expectations can lead to employees feeling confused about their work and family roles, and will lead to a higher level of work-life conflict experienced by this individual (Soltani et al., 2013). These uncertain job expectations can include an unclear job description and organisational chart, especially when an organisation's environment is informal (Soltani et al., 2013).

The role conflict theory describes the individual's work and family roles as expectations from others about the appropriateness of their behaviour. Individuals want to succeed with respect to these role expectations by doing their best and this may lead to the draining of their resources. Although gender roles are supposed to be balanced in a modern society, women still perform more family responsibilities than men (Yardley, 2012).

Chang and Hancock (2003) argued that nurses have high levels of responsibilities, roles and duties that fall outside of their area of speciality due to low staffing, and this may lead to the uncertainty about their job requirements, with the result that role ambiguity will be present. Role ambiguity is clearly elevated when there is limited communication with the nurses about important information regarding a patient. This limited communication affects the job requirements of nurses, especially when the relationship between the nurse and the other health professionals is weak, because their work roles are located between the health professionals (doctors) and patients (Vazifehdost & Rahmani, 2013). In a study conducted by Karimi, Omar, Alipour and

Karimi (2014) it was found that role ambiguity and stress have a positive relationship under nurses, thus nurses who are unaware of their job requirements will have a higher risk of developing stress. In contrast to this evidence, nurses do have a scope of practice they must adhere to, that stipulates their job tasks and roles. But with the big problem of staff shortage in SA, a nurse's job may require of them to complete tasks and roles that fall outside of their job requirements. This can lead to nurses experiencing emotional exhaustion, as their levels of occupational stress increase (Hawksley, 2007; Soltani et al., 2013).

2.3.1.2 Role overload

Role-overload is described as "having too many things to do and not enough time to do them" (Aryee et al., 2005, p. 134). Role-overload is positively linked to work-life conflict. Role-overload may lead to the handing in of uncompleted tasks, feelings of exhaustion or fatigue, and a constant feeling of being rushed. Thus an individual who experiences role-overload is unable to integrate the different roles of work and family life. It also has a spill-over effect - if an individual is dissatisfied in one role (for example at work) he/she will not enjoy the roles at home (Aryee et al., 2005). This effect can have negative consequences for the organisation, like absenteeism, lower levels of commitment, higher turnover, and physical and mental health problems, such as burnout. Role-overload is a type of time-based role-conflict; where there is not enough time and resources for the multiple roles (Higgins, Duxbury & Lyons, 2010).

In a study conducted by Higgins et al. (2010) it was found that women that are in dual-earner families experience higher levels of overload and stress than men. It was also evident in a study that employees with young children had little time for relaxing between the demanding roles associated with work and family (De Villiers & Kotze, 2003). Role overload increases if a person has a family life and children to care for (Duxbury, Lyons & Higgins, 2008). Especially a manager who works 40-60 hours a week will have feelings of guilt, and try to spent the same amount of time with his/her family without relaxing, this may lead to health problems, which enhances the family-work conflict (Duxbury et al., 2008).

When there are too many job demands, like time and energy demands (for example tight deadlines, insufficient resources to meet the demands), it affects one's ability to

function optimally in terms of one's family's demands. A person can also have too many family demands (such as family responsibilities, social activities and education), which may lead to more role overload (Duxbury et al., 2008).

Freeny and Tiernan (2009) argued that heavy workload is a stressor for the nursing profession. This heavy workload is due to the fact of the shortages of nurses in SA, and also all the administrative duties a nurse has in her daily routine, some refer to this as illegitimate tasks (tasks that fall outside of the range of tasks associated with the occupational role, and are of high importance). Then there is also a lack of facilities that are available for the nurses, especially in the public hospitals; and the fact that fellow nurse practitioners are doing their work poorly, that may contribute to nurses being required to do more than what their job entails. As previously mentioned the burden of quality services that a nurse must render, as well as having to live up to a certain standard, may lead to role overload. These job demands can lead to burnout under nurses, without considering the additional burden of multiple roles to fulfil as a nurse, spouse and/or parent. The excessive pace and amount of work nurses have to fulfil will likely lead to exhaustion and burnout. According to Hanif and Raza Naqvi (2014) the long working hours of a nurse can also effect the time they have with their family and may lead to more stress and finally burnout under them.

On the basis of the preceding discussion, the following two hypotheses may be formulated:

Hypothesis 2: Role overload has a significant positive relationship with WLC among nurses.

Hypothesis 3: Role overload has a significant positive relationship with burnout among nurses.

2.3.1.3 Work-life culture

The organisational culture of a company can be defined as the shared expectations, values and philosophies that may be written or unwritten, which hold an organisation together. A company's organisational culture is its unique way of distinguishing it from another company (Manetje, 2009). The organisational culture can have a positive or negative outcome on the individual and the organisation. Positive outcomes on the

individual include satisfaction and negative outcomes include stress. Thus a dysfunctional culture will lead to negative outcomes (Ólafsdóttir, 2008).

A company's culture can actively influence the quality of the work-life balance of their employees. This may take the form of formal or informal policies regarding work-life balance. A work-life culture exists when an organisation takes the time to ensure that they integrate their employees work and family lives with each other. When an organisation displays a supportive culture it will decrease the levels of work-life conflict experienced by an individual. Some organisational culture features that will help to decrease work-life conflict are: when the employee receives emotional and social support from their managers, or have opportunities to make arrangements to spend some time with their families, and organisational flexibility (for example working from home) (Bond, 2004). An organisation can have many work-life balance programs, but if the supervisor conveys the information incorrectly or limits the use of such a program, it will not be beneficial to the employee. Some companies may send employees for training, but then disregard their use in the company. Thus a company may offer all these programs and benefits, but still have an unsupportive organisation culture towards it (Jahn, Thompson & Kopelman, 2003).

An organisational culture that supports long working hours, role overload and role ambiguity will lead to higher levels of work-life conflict (Bond, 2004). By not fostering a family-friendly culture it will create tension among employees which will affect them personally, as well as the organisation (Ólafsdóttir, 2008). When there is inadequate human resource provision in a company it can contribute to the work-life conflict of an individual. The employees will then have more workload to handle and longer working hours to complete the tasks (De Villiers & Kotze, 2003). A traditional model of work embedded in organisation culture, assumes that an employee's work domain is isolated from their family domain, which creates more tension under employees (Francis, n.d.). A negative organisational culture has been linked to stress, lack of job commitment, job dissatisfaction and job burnout. The dimensions of organisation culture that effect job burnout are where employees work under a lot of pressure, as well as where the leadership in the organisation do not grant job autonomy and do not promote participation of employees in decision-making (Dimitrios & Konstantinos, 2014).

A negative work-life culture consists of three possible components (Ólafsdóttir, 2008). The first component refers to the organisation's time demands, and concerns the number of hours spent at work and the expectation that employees must prioritise work above family. Time-based conflict and role conflict experienced by the employee trying to equally divide time between their family and work life is a major source of work-life conflict. The second component is that visibility is a norm in the organisation culture; this means that employees, who have flexible working hours, may be seen as weak and not committed to the organisation. Thus an organisation that values "face time" sees devoting time to family life as a negative outcome. The last component is when employees experience a lack of support from their managers they will be hesitant to make use of the family-work benefits. A supportive work-life culture will reduce work-life conflict and enhance commitment levels among the employees (Ólafsdóttir, 2008). Thus an unsupportive, negative work-life culture will increase work-life conflict and stress among the employees.

2.3.1.4 Time spent at work

Employees who work on Sundays may experience health impairments and work-life imbalance. This is evident because social and leisure activities occur at a higher frequency over weekends, especially on Sundays. Working on Sundays interferes with the individual's social rhythms, and takes time away from them to recover on weekends from work (Wirtz, Nachreiner & Rolfes, 2011). In similar vein longer working hours increase an employee's work-life conflict (Bond, 2004).

Flexibility of working hours exist when an employee has the control to choose how to divide his/her time between work and life roles. This can have a positive effect on the worker's ability to coordinate the responsibilities with respect to their different demands and minimise work-life conflict. This will reduce their levels of stress, for example to take the time to attend to their sick child and not worry about falling behind on their job demands (Casey & Grzywacz, 2008).

According to Bond (2004) it was shown that spending long working hours in the workplace will lead to greater role-conflict between work and life demands. Employees who have the option to work part-time schedules are more satisfied with their job and life (Bond, 2004).

2.3.1.5 Emotional labour

The emotional labour that nurses must endure, can be defined as an attempt to regulate one's feelings by creating observable facial and bodily displays that meet the requirements of an organisation, in this case a hospital. There are two types of emotional labour strategies an individual can follow, namely surface acting (where employees change their outward expression, but do not feel the emotion they are displaying) and deep acting (when they regulate their inner feelings to actually feel what they are displaying). Part of a nurse's job is the highly emotional interactions they have with their patients. Nurses must display genuine empathy and caring feelings towards their patients. Nurses may thus perform emotional labour by holding back their negative feelings towards a patient through surface acting, or they may change their inner feelings to feel the desired emotions by deep acting (Chou, Hecker & Martin, 2012).

Emotional labour can be seen as a job demand where patient interaction is involved in nursing. When a nurse has a higher frequency of interacting with the negative emotional state of a patient it may be stressful for the nurse. Nurses will thus act more in terms of surface acting when dealing with a difficult/demanding patient. This surface acting of nurses increases their emotional dissonance, and is a contributing factor towards emotional exhaustion and job dissatisfaction. Where the frequency of dealing with difficult patients (a job demand) is higher, it will more likely lead to emotional exhaustion (Chou et al., 2012).

Emotional dissonance can be interpreted as "a subjective emotional state that represents a mismatch between genuine emotional expression and organisational requirements of emotional display" (Cheung & Tang, 2012, p.50). Thus it represents a discrepancy when emotions displayed at work are not how the employee genuinely feels. The surface acting of an employee in their state of emotional dissonance will most likely cause alienation, dissatisfaction and stress (Pugh, Groth & Henni-Thurau, 2011). In contrast deep acting is not likely to result in burnout; because the emotional dissonance is less in deep acting than in surface acting (Bozionelos & Kiamou, 2008).

Some of the negative effects emotional labour may have on nurses will be discussed next (Loukidou, Loannidi & Kalokerinou-Anagnostopoulou, n.d.). Firstly, nurses who display a caring face toward their patients have more stress to deal with. Secondly,

the continuous suppression of real emotions may have an impact on the nurses' somatic health that may range from sleeplessness, hypertension and cancer. The emotional dissonance that nurses experience has a negative impact on their well-being, such as alienation, cynicism, depression and moral distress. Lastly, emotional labour may affect the nurse's performance. Low involvement, dissatisfaction, and withdrawal behaviour are some outcomes that may become visible when they are performing emotional tasks. Emotional labour can be positive or negative for nurses' well-being, but it depends on how it is experienced and dealt with. Therefore it is important for nursing educational institutions to teach their upcoming nurses about the emotional aspects of their work and by empowering them with information on emotional skills and how to use them effectively in the workplace. Another way to deal with emotional hurdles is to act before the problem occurs, by teaching critical thinking strategies and role playing in the nursing educational institutions, in order to enhance their tacit knowledge and explore the difficulties associated with the emotional aspects of nursing (Loukidou et al., n.d.).

In light of the preceding discussion, the following two hypotheses may be formulated:

Hypothesis 4: Emotional labour has a significant positive relationship with the level of WLC experienced by nurses.

Hypothesis 5: Emotional labour has a significant positive relationship with the level of burnout experienced by nurses.

2.3.2 An Overview of the Job Resources related to Work-Life Conflict

Job resources refer to physical, psychological, social and organisational aspects that reduce job demands and enhance personal growth and learning. There are three levels of resources. The first level is the organisational level; which includes resources such as salary, job security and opportunities to grow in the organisation. The second level is interpersonal resources; it includes resources such as support from co-workers/supervisors and the culture of the organisation. Resources included in the last level, the task level, is skill variety, autonomy and task identity and feedback (Yardley, 2012). The availability of job resources leads to organisational commitment and work engagement, and is associated with the motivational process (Xanthopoulou et al., 2007). Job resources can play an intrinsic or extrinsic motivational role in the work

place. In an intrinsic motivational role, the job resources encourage employee's growth, knowledge and development, whereas in an extrinsic motivational role, the job resources are instrumental in succeeding in work goals (Rothmann et al., 2006).

The Conservation of Resources (COR) theory of Hobfoll (Xanthopoulou et al., 2007) is a relevant theory in explaining the effects of job resources on employees. This theory's main assumption is that people see their resources as valuable and are motivated to obtain, retain and protect their resources. Resources can be seen as any object, characteristic, condition or personal energy that is valued in its own right or that are valued as a means for attainment and protection of other objects, characteristics, conditions and personal energy. This theory has an assumption that personal resources effect each other and that an individual with more resources are less vulnerable to the loss of resources and has a greater chance to gain more resources (Rothmann et al., 2006). This implies that when employees face high job demands, job resources may help them by gaining motivational potential. An example can be when an employee is confronted with an emotional demand, the resource known as social support might become more instrumental for the employee.

A person depends on his/her resources to achieve balance among his/her work-life demands. There are three social contract resources that can help an employee to succeed in their work environment. The first resource is whether the person has the time to do everything he/she must do - it is called a temporal resource. In a working environment it could be related to telework (working from a secluded location), multitasking (teleconferencing while driving) and information technology (computers, cell phones and internet). The second resource is financial resources; budgeting provides a chance to an individual to buy certain goods to improve their satisfaction. Control is the last resource; in a working environment where people are motivated to achieve empowerment; it will enhance an employee's ability to select and create important outcomes for themselves (Greenblatt, 2002). Resources in a job, like autonomy and supervisor support, can enhance an employee's work-life balance (Voydanoff, 2005).

A resource that can be implemented in a hospital that may have a buffering effect against the job demands experienced by nurses is social support (Roelen, van Rhenen, Schaufeli, van der Klink, Mageroy, Moen, Bjorvatn & Pallesen, 2013). Thus

a hospital must create a supportive social work environment by providing supervisor support and co-worker support to help with the nurses' well-being and other positive work outcomes. An organisation can also buffer the impact of stressors and work-life interference effects by providing nurses with performance-related rewards and feedback, as well as making them part of the decision-making of the health organisation (Van der Heijden, Demerouti, Bakker & Hasselhorn, 2008).

In the next section a few job resources are going to be explored in detail that may lead to growth and personal development, namely job autonomy, social support and family-friendly policies and practices.

2.3.2.1 Job autonomy

Job autonomy can be defined as: "the degree to which the job provides substantial freedom, independence and discretion in scheduling the work and in determining the procedure to be used in carrying it out" (Ahuja, Chudoba, George, Kacmar & McKnight, 2002, p. 4.). Job autonomy is an enabling resource at the organisational level, and it refers to the extent to which individuals are in charge of deciding how to do their jobs (Voydanoff, 2004). Job autonomy comes with the following resources for an employee, namely time management skills (employees can decide their own working hours), initiative and self-confidence (Voydanoff, 2004). Research has shown that job autonomy is positively related to work performance, meaning that if there is a match between the autonomy level and the task environment an employee will perform better (Ahuja et al., 2002). It is not clear whether job autonomy reduces work-life conflict, it only provides an individual control over their job, but stress may still be carried over to family life, leading to a negative spill-over from work to family life (Voydanoff, 2004). In the study conducted by Ahuja et al. (2002), the results showed that job autonomy is negatively related to job exhaustion and positively to job satisfaction, indicating that job autonomy may help reduce the work-life conflict experienced by employees.

Job autonomy has a positive effect on work-life conflict, because it provides a person with a larger number of opportunities to deal with in stressful situations; therefore it can be seen as preventing the negative effects of work-life conflict on a person's well-being and occupational outcomes (Brauchli, Bauer & Hämmig, 2014). The study conducted by Brauchli et al. (2014), however, showed that job autonomy only reduces work-to-life conflict and not life-to-work conflict.

Job autonomy is highly restrictive for nurses, as their work is closely monitored by a scope of practice they must adhere to. Nurses do not have the authority to make their own decisions as they are guided by a set of rules/guidelines of the hospital, and they must also perform the actions and procedures the doctors asks of them. The level of independence of a nurse is very slim. Bauer (2010) stated that any job autonomy a nurse practitioner has is threaten by the dominance of the medical practitioner. As research has shown with respect to job autonomy, it is still unclear whether job autonomy can reduce work-life conflict. It can help a nurse with time management between the different roles, but it does not guarantee a stress decrease. This is an important reason why job autonomy is not really a job resource for nurses, rather a job demand; but it is important to acknowledge that job autonomy can be an enabling resource for other occupations.

2.3.2.2 Social support

According to Carlson and Perrewé (1999) one of the most important antecedents of job resources is social support. Social support is defined as: “a mutual exchange where emotional and physical comfort is provided through helping relationships with family, friends, co-workers, and others” (Ojha, 2011, p. 49). Social support can be a source of support from the family domain, as well as the work domain. Social support is characterised by four types of support, namely emotional support, that is the most universally acknowledged type of support (it includes empathy, love, caring and trust); instrumental support, which is the most tangible and direct form of social support (time, money and energy); appraisal support (information that is relevant to self-evaluation, could be in the form of feedback) and informational support (when advice and suggestions are given by one individual to another) (Ojha, 2011; Ten Brummelhuis, Oosterwaal & Bakker, 2012).

Support from the organisation may help nurses to deal with emotional labour by utilising different strategies. Organisational support contributes to the well-being of the nurses by providing socio-emotional resources to the nurses and creating the expectation that the organisation values them and will reward their contributions. When this is the case, then nurses will choose to exert deep acting when they are performing emotional labour in the hospital (Chou et al., 2012). Emotional support from

supervisors and colleagues moderates the relationship between the emotional job demands and exhaustion under nurses (Schmidt & Diestel, 2012).

Social support can help an employee balance work and family roles, and be a personal resource that will help them deal with all their demands, enabling them to have high levels of work performance. The support of co-workers will establish a long-term relationship, and if the organisational culture displays a supportive environment, the employees will be more dedicated to the organisation and put more effort into their job roles (Ten Brummelhuis et al., 2012). Research studies about social support from supervisors revealed that it is associated with lower levels of work-life conflict incidences; therefore a lack of supervisor and co-worker support will be associated with higher levels of work-life conflict (Ojha, 2011). Thus support from a supervisor is a beneficial resource and can decrease the negative spill-over effect of work-life conflict stressors (Hammer, Kossek, Yragui, Bodner & Hanson, 2009).

Social support has been studied as an independent/ intervening/ mediating/ moderating variable, especially in terms of the theoretical explanation of the strain-reducing effect of social support. Social support can promote coping in people which reduces the effect of a stressor on the strain they may encounter. Some studies suggest that social support mediates the relationship between job demands and work-life conflict (Ohja, 2011).

Wadsworth and Owens (Ojha, 2011) studied the influence of social support on work-life conflict and their results indicated that social support from supervisors had a negative relationship with work-life conflict and also social support from co-workers had a negative relationship with work-life conflict. Ten Brummelhuis et al. (2012) stated that support from supervisors is related to higher task performance, job commitment, and a better relationship with co-workers. A social exchange relationship is formed when a team member cannot perform their work, and co-workers divide the work between them to complete the job tasks as a team, this emerging teamwork then leads to higher commitment and a helping relationship (Ten Brummelhuis et al., 2012).

As can be inferred from the studies discussed above, the most common form of social support that has been researched at work is the support of co-workers and supervisors. Research shows that having a supportive supervisor can lead to lower levels of stress and reduced role conflict. A supervisor who is sensitive with respect to

work-life outcomes influences the employees' levels of stress, by lowering it (Warren & Johnson, 1995). Bakker and his colleagues' (Ten Brummelhuis et al., 2012) research found that co-worker support reduces the levels of burnout and impaired work performance that are caused by job demands. Thus social support weakens the harmful effect of job demands on an employee. Social support also reduces the negative consequences of work-life conflict, which may be burnout (Ohja, 2011). Ten Brummelhuis et al. (2012) reported that social support prevents the depleting effect family demands has on task performance at work, and helps employees to reconcile their work and family role. Social support may reduce work-life conflict, with its influence mediated by stress (De Sousa, 2013). Thus in the present study organisational support, that is a job resource, may have a moderating effect by minimising the relationship between job demands and work-life conflict, as well as the impact between work-life conflict and burnout.

In light of the preceding discussion the following hypotheses may be formulated:

Hypothesis 6: Organisational support (from co-workers and supervisors) moderates the impact of the job demands, role overload and emotional labour, on WLC among nurses.

Hypothesis 7: Organisational support (from co-workers and supervisors) moderates the impact of WLC on burnout among nurses.

2.3.2.3 Family-friendly policies and practices

Work-life balance is an important aspect of today's organisation for the employee and employer. Organisations have different innovative practices they adhere to in order to manage work-life conflict. Work-life benefits and practices can include the following initiatives: flexible working hours, job sharing, alternative working arrangements, leave policies, child-care facilities and employee assistance programmes (EAP). These practices lead to employees experiencing higher levels of organisational commitment and job satisfaction. These practices, if implemented by the employer, will help employees to manage their work life and also their life outside work better. Some organisations allow employees to take off time to deal with personal issues; this will also enhance their work-life balance. It is important that an employer understands the different types of employees and cater for their needs. For example in a diverse

organisation there will be dual-earning couples, singles, parents, people at different career stages and gender differences that may affect work-life balance (Hooja, 2012).

There are two work-life policies an employer can implement, namely structural work-life support and cultural work-life support. Structural work-life support is where an employer alters the human resource policies and job structures in accordance with the location an employee works at, or provides additional instrumental resources to make the job easier. Examples of this support is the redesigning of the job (flexible working hours and virtual communication), minimising workload, implementing occupational health policies, redesigning policies on absenteeism and sick time, and benefits for childcare and elderly care (Kossek, Lewis & Hammer, 2010).

The second policy is a cultural work-life policy; this policy refers to social and relational support. Social support can be from supervisors, co-workers and the organisational culture that values the employees who have to fulfil their work and life roles. Training can be implemented for all the workers on how to be supportive and changes with respect to the organisational norms can be made. It is important to have appropriate norms, not myths, as the myth about the ideal worker and also that the ideal employee places their work before their family, still exists. When these two types of policies are linked with the organisational social system then it will promote the effective management of work-life balance (Kossek et al., 2010). As mentioned, support from the organisation can be a resource in aid of the work-life balance of a person. Personal coaching can also be seen as a support system focusing on the employee.

The type of support the organisation provides to their employees will determine whether it acts as a resource or not. It could take the form of different work-life balance policies for different types of employees. For example, an employee with young children and higher levels of work-life conflict will be attracted to flexible working hours; whereas an employee with lower levels of conflict will want the opportunity for telework. Research also found that when an organisation provides an on-site childcare centre, the absenteeism levels will decrease under the employees who have children (Beauregard & Henry, 2009). Another policy-related resource could be where an organisation provides the employees with personal life coaching (Hawksley, 2007). Personal life coaching is a process where a coach offers help to an employee to

develop their skills, achieve their goals and manage the challenges they face every day, such as work-life conflict (Hawksley, 2007).

Newly graduated nurses (NGN's) have more difficulty in transitioning into the workplace after graduating. It is evident that if a health care organisation empowers these NGN's then they will have lower levels of burnout and less job dissatisfaction. Structural empowerment, by providing the employees access to the social structures of the work environment, leads to more satisfied employees. Access to opportunities for growth, information, support and resources gives employees some empowerment. This structural empowerment has been linked to greater job satisfaction levels of nurses; and lower job turnover from NGN's. Another organisational resource is nurse staffing adequacy; this will lead to higher job satisfaction among nurses as a result of having the ability to perform effective patient care. In their study Pineau Stam, Spence Laschinger, Regan and Wong (2015) found that structural empowerment and nurse staffing adequacy contribute to higher job satisfaction, the strongest predictor, however, was structural empowerment.

These practices/policies of an organisation are seen as a symbol of the concern the organisation has for its employees; thus it may serve to attract and retain qualified employees, in this case qualified nurses (Beauregard & Henry, 2009). In Warren and Johnson's (1995) study they found that employed mothers that made use of the organisation friendly benefits available to them, productively characterised their demands in work life as well as family life. Shree (2012) stated that workers with a supportive organisation culture and co-workers, has higher levels of family satisfaction. Thus in the present study the benefits the hospital may provide, such as family friendly policies and practices may help a nurse in fulfilling their care-giving responsibilities and reduces the role conflict they may experience.

The following hypothesis may therefore be formulated:

Hypothesis 8: A supportive work-life culture moderates the impact of care-giving responsibilities on the WLC of nurses

2.3.3 The Interaction between the Job Demands and Job Resources

As previously mentioned the job-demands resources model has two different underlying psychological processes, namely job demands that evoke a strain process

and job resources that initiate a motivational process. Negative outcomes are associated with the strain process, whereas positive outcomes are associated with the motivational process. Hockey's compensatory regulatory-control model can be used to explain the strain process (Cabrera, 2013; Schaufeli, Bakker & Van Rhenen, 2009). This model explains the strain process, as: "When job demands increase, regulatory problems occur in the sense that compensatory effort has to be mobilised to deal with the increased demands whilst maintaining performance levels. This extra compensatory effort is associated with physiological and psychological costs, such as increased sympathetic activity, fatigue, and irritability" (Schaufeli et al., 2009, p. 894). This energy draining effort that a person utilises may lead to burnout, and then to absenteeism (negative outcomes) (Schaufeli et al., 2009). In this case job demands, such as role ambiguity, role overload, unsupportive work-life culture, time spent at work, and emotional labour can lead to the strain psychological process.

The next psychological process, namely the motivational process, means that job resources have positive consequences, such as achieving working goals. These resources foster an employee's opportunities, learning and growth in the organisation. When an organisation supports job resources it creates higher levels of commitment from employees to strive for organisational goals. Therefore job resources can lead to work engagement and fulfilling the basic human needs such as autonomy, relatedness and competence. Job resources such as job control, supervisor support and work-family policies can enhance the employee's commitment and job satisfaction levels (Cabrera, 2013; Schaufeli et al., 2009). Job resources, such as social support and family-friendly policies/practices (supportive work-life culture), as discussed earlier, may lead to the motivational psychological process. Figure 2.2 below, illustrates the interaction effects between job demands and job resources.

		Low	Job Demands	High
Job Resources	High	Easy Job		Challenging Job
	Low	Boring Job		Stressful Job

Figure 2.2. The Interaction Effects between Job Demands and Job Resources. Adapted from “Work-related well-being of educators in a district of the North West Province,” by L. T. B. Jackson and S. Rothmann, 2005, *Perspectives in Education*, 23, p. 110.

This figure illustrates that the interaction effect between job demands and job resources may play a role in characterising a job. HD-HR: High job demands and high job resources is seen as a challenging job (resulting in high strain and high motivation). HD-LR: High job demands and low job resources is a stressful job (resulting in high strain and low motivation). LD-HR: Low job demands and high job resources is experienced as an easy job (resulting in low strain and high motivation). LD-LR: Low job demands and low job resources represents a boring job (resulting in the absence of strain and motivation) (Demerouti et al., 2001; Jackson & Rothmann, 2005).

In contrast to having job resources; job demands is associated with exhaustion in the long-term, while the absence of job resources may lead to disengagement. It is difficult to meet the job demands, when there is an absence of job resources and it can lead to an individual experiencing symptoms of withdrawal. Thus the interaction between job demands and job resources can lead to the development of burnout (Demerouti et al., 2001). In literature it is clearly stated that is important to consider the interactional effect between job demands and job resources.

2.4 FAMILY DEMANDS AND RESOURCES

In Western countries the research on both work life and family life has been extensive. Much of the research focuses on the effect of the strains and the resources at work, as well as the effect family life has on the person (Lu, Kao, Chang, Wu & Cooper, 2008). Research indicates that there is a positive relationship between family

responsibilities and work-life conflict (Ojha, 2011). Up to date research on family life has, however, not received as much attention as on work life.

2.4.1 An Overview of the Family Demands of Work-Life Conflict

According to Ojha (2011) family demands can lead to a greater expenditure of time on family life, minimising the resources available to focus on work responsibilities, and resulting in work-life conflict. It is important to look at the life cycle style of a family, because the life cycle can lead to certain changes, like, for example, getting married, having children, and elderly care. These changes may lead to more strain as a result of work-life conflict, and a negative spill-over onto work life. Every individual has a unique life cycle pattern, some do not get married, others marry more than once, some have children, other do not have children. These life cycle patterns differ in accordance with age and show variation in sequencing. A life cycle style could therefore be seen as characterising a family household, and is determined by marital status, presence/absence of children, size of household and economic resources (Sweet, n.d.).

There are two types of societies, the patriarchal-hierarchical society, where the woman's job is primarily to be the mother, wife and daughter and the man's job is to be the breadwinner. In the egalitarian societies men and women are viewed as equal. In SA, a diverse country with different cultures, both of these societies will be present. The social support of a wife or husband to their partner plays a vital role in reducing stress. It is thought that the egalitarian division of domestic labour and social support will improve a married employee's well-being (Kulik & Rayyan, 2006).

In the next section a few family demands that may lead to higher stress levels are explored in detail, namely societal expectations and care-giving responsibilities (children and elderly/relatives).

2.4.1.1 Societal expectations

According to Hill, Jacob, Shannon, Brennan, Blanchard and Martinengo (2008) previous studies have highlighted the difference between men and females in work-to-family conflict and family-to-work conflict. The sex role theory explains that women are regarded as responsible for the family life and men are responsible for the working life (Ten Brummelhuis et al., 2008). Early research showed that family-to-work conflict

is more likely to be experienced by women than men, whereas men will experience more work-to-family conflict. Employed mothers with young children (under the age of 6) will experience more family-to-work conflict than the fathers; and be absent from their work more often (Hill et al., 2008). In contrast to this, other findings suggested that there is a greater negative spill-over from home to work conflict for men (Barnett & Marshall, 1992; Forthofer, Markman, Cox, Stanley, & Kessler, 2004). Ten Brummelhuis et al. (2008), however, stated that to date there is no empirical evidence supporting the sex role theory.

The mixed results about gender and work-life conflict can be explained by looking at cultural and social factors, like the expectations one person may have in terms of gender roles. With that being said, an individual's personality traits may also be contributors to work-life conflict differences. With the modern family norms, like the egalitarian role division, and the increasing tendency for women to be employed, it is important to consider the gender-norms associated with the family (Ten Brummelhuis et al., 2008). Some society's husbands are more devoted to their family responsibilities, and share the family responsibilities equally with their wives; other husbands do not have the time to help with family responsibilities, as their work life is the main priority, with the result that their wives experience more family demands and work-life conflict. In contrast, husbands whose wives are managers or professionals will experience more family demands, because the wives will spend more of their time at their work (Lu et al., 2008).

2.4.1.2 Care-giving responsibilities

A family who has infants and preschool children has more family responsibilities to attend to than parents who have children who are at school and adult children. The number and age of the dependent children plays a role in family demands - a family that has no children will have lower levels of work-life conflict (Ojha, 2011). Thus parents experience more family-to-work conflict than non-parents (Lu et al., 2008). Parents who have young children experience more family-to-work conflict than parents with older children, especially under the age of 6, where a child needs a higher level of care (Lu et al., 2008; Ojha, 2011). It was found in a study conducted with Dutch employees, that having young children leads to higher levels of emotional exhaustion

(Ten Brummelhuis et al., 2008). Literature also reveals that having more children is associated with more work-life conflict (Hill et al., 2008).

In addition to caring for children, caring for elderly persons or other relatives can have a greater negative spill-over effect from family to work life, than for non-caregivers. It is usually individuals over the age of 51 years who are caregivers to elderly family members or relatives. They usually have older children who assist them in the caregiving process. The additional care for an adult person may create some conflict in balancing one's multiple roles; especially if there are children - then a person's time must be invested in childcare, household chores, cooking and caring for the elderly or for relatives. This type of caregiving can lead to the caregivers contracting psychological and physical illnesses that are caused by the time demands (Schmidt, 2011).

The following hypothesis may thus be formulated:

Hypothesis 9: Care-giving responsibilities have a significant positive relationship with the WLC of nurses.

Hypothesis 10: Care-giving responsibilities have a significant positive relationship with burnout among nurses.

2.4.2 An Overview of the Family Resources applicable to Work-Life Conflict

Family life can be beneficial for work life, when looking at it from an enrichment perspective. This approach looks at three beneficial aspects that family life has for work life. Firstly, family life can be rewarding, with the result that fulfilment and energy may spill over into the work life. Secondly, family life can be an opportunity for developing certain skills and knowledge that the individual may use at work. Lastly, it can be an opportunity to extend a person's social capital by meeting new people (Ten Brummelhuis et al., 2008). According to Voydanoff there are two types of family resources, namely enabling resources, where the resources in one domain may contribute to the other domain, and secondly, psychological rewards, which are feelings of being valued in family life, and these feelings may transfer to positive attitudes and behaviours in the workplace (Voydanoff, 2005).

Role accumulation (known as the participation in multiple roles) can have a positive effect on an individual. Firstly, work experience and family experience can have a positive effect on the individual's psychological and physical well-being. The satisfaction in the work domain can contribute to the happiness and life satisfaction of a person. Secondly if an individual is actively involved in both roles, work and family, then it can buffer the person against the distress experienced in one role. Research has indicated that if an individual has a family stressor, but has high levels of satisfaction at work, then their well-being will not be affected. Thirdly, role accumulation is when a positive experience is transferred from one role to another. This is when participation in a role gives the individual energy, and this energy is transferred to the other role (Greenhaus & Powell, 2006).

In the next section a few family resources that may lead to growth and personal development are explored, such as marital satisfaction and support from family, life partner and friends.

2.4.2.1 Marital satisfaction/support

Dual-earner couples, who have both work and family roles to fulfil, are seen as having higher levels of stress and a lack of time to fulfil the multiple roles. Despite the lack of time a couple has, if one focuses on one role at a time; they may experience their multiple roles as an opportunity to grow. The more a couple believes in the traditional gender roles, (that the woman is responsible for childcare and housework) the more the imbalances or conflict between their work and family roles they will experience. Thus it comes as no surprise that working women carry a larger burden with respect to the division of time between family and work roles (Matias & Fontaine, 2012). According to Opie and Henn (2013) it was stated that married women and mothers experience more work-life conflict than unmarried single females. It seems, however, that many dual-earning couples develop the necessary skills to overcome this role-conflict between family and work demands, and experience work-life balance with success. According to Matias and Fontaine (2012), previous studies have shown that in the case of dual-earner families their balance of work and family is better when there are higher levels of marital satisfaction; and/or their marital satisfaction is due to their ability to achieve work-life balance.

According to Shree (2012, p. 19) marital satisfaction refers to “the degree to which an individual’s needs, expectations, and desires are being satisfied in their marriage”. Marital satisfaction is an individual’s subjective experience of the marriage. There are some work factors that may influence marital satisfaction. Firstly, working hours (spending less time at the job, will lead to increased marital satisfaction); secondly, working schedule (research shows that a traditional Monday to Friday schedule, as well as a flexible schedule will lead to greater marital satisfaction); thirdly, control over scheduling (job flexibility decrease work-spouse conflict and increase marital satisfaction, and job flexibility has been linked with positive outcomes of work and family life); and lastly, job commitment (individuals who have higher commitment, and a level of control over both their work and their marriage have less work-life conflict) (Shree, 2012).

According to Young (cited in Ten Brummelhuis & Van der Lippe, 2010) most research studies focus on dual-earners and how companies could introduce work-life policies to accommodate employees who have a family. Recently the focus has been turned on single employees who feel discriminated against because these policies exclude them. Single employees without children have other demands in their life that can put strain on their work life, for example the volunteer work and leisure activities they are involved in. They do not experience the support of a partner or children compared to employees from nuclear families (thus displaying a lack of family resources). It is important to notice that different family structures have different responsibilities that must be taken into account when implementing work-life policies at work. In Ten Brummelhuis and Van der Lippe’s (2010) study it was found that employees who had a lack of family support, benefitted the most from the social support provided at work.

In today’s dual earning society, it is evident that a married employee will experience higher levels of stress in their attempts to complete each role as best as they can. Thus this may lead to the employee experiencing work-life conflict, especially in the nursing profession which is a female dominated sector. Women today still see themselves as more responsible for the family domain as men. Especially with nurses working shift work, it makes it difficult for them to have marital satisfaction; keep up with the household chores, and keep in touch with their friends and family. The working hours of nurses may contribute to stress/conflict between them and their spouses

(Shree, 2012). Therefore flexible working schedules and control over this schedule may contribute to higher marital satisfaction. Thus research shows that work-life conflict and stress is higher when there are lower levels of marital satisfaction for both men and women (Shree, 2012). This is especially noticeable in SA where the nursing staff shortage is high and the emigration of nurses to other countries plays an important role in the work demands nurses have and the effect it may have on their family. Thus with this research marital satisfaction can be seen as both a family demand and a family resource, depending on the quality of the marital satisfaction.

A person, who is maritally satisfied, has effective communication with their life partner, spends more leisure time together, has less conflict over taking care of their children, is more sexual satisfied, and has less arguments about their financial problems. All of these factors are likely to be linked to the individual's management of his/her job/family demands (Shree, 2012). Thus marital satisfaction among nurses in this present study may reduce work-life conflict/interference, which is caused by the different responsibilities of care-giving they must attend to.

Hypothesis 11: Marital satisfaction moderates the impact of care-giving responsibilities on WLC among nurses

Hypothesis 12: Marital satisfaction has a significant negative relationship with the WLC of nurses.

2.4.2.2 Family support

Family support, from a partner or a blood relative, can lead to better performance in the work domain. Usually this support involves empathy, understanding and assistance (Voydanoff, 2005). In research it was also stated that partner support has a negative relationship with family-to-work conflict (Ten Brummelhuis et al., 2008; Voydanoff, 2005).

Social support from family may constitute a buffering effect against burnout and work-life conflict and may help an individual regain self-efficacy (Lin, 2013). This social support a partner provides to their partner, may help a nurse to overcome the everyday struggles at work and help them to recharge for a new challenging day. The nursing profession is dominated by female employees and research shows that a working female, who is married and have children, is more prone to experiencing work-life

conflict. Research, however, also indicates that a married employee with high levels of marital satisfaction will find a way of balancing their work/family roles, depending on the quality of the marital relationship in terms of an equitable distribution of responsibilities and support (Shree, 2012; Ten Brummelhuis et al., 2008). Thus the research studies may appear to be contradicting each other, but it was also found (Barker & Pawlak, 2011) that families nowadays have more of a modern approach toward handling their family responsibilities, which is no longer like in the past, where the woman's duty was to handle all the family responsibilities alone. It is speculated that nurses, especially women who enjoy more support from their partners, will deal with work and family roles, such as caring for children, more efficiently.

Support from friends is another form of informal social support. It includes emotional support, such as advice giving and information sharing. Social support can create a sense of belonging. Support creates additional resources to a person that can help with balancing the work and family responsibilities (Voydanoff, 2004).

2.4.3 The Interaction between the Family Demands and Family Resources

The effects of family demands can be explained through the COR theory, which describes the reaction of an individual to the stressors in their environment. When stressors (family demands/work demands) are high, then an individual loses valuable resources, leading to feelings of burnout. Such an individual cannot deal with all the piled up demands of work and family. In the case of high family demands, it may cause stress because of the physical and mental effort the demands require. In this case, personal resources, which refer to assets that are inherent to the person, are needed to cope with the family demands - these resources can be personality traits and energy. Thus if an employee has a high level of family demands and their personal resources are depleted, they are likely to underperform in their work role. In contrast to this if an employee has high family demands and high family resources with personal resources, they are likely to be successful in both their family and work roles (Ten Brummelhuis et al., 2012). The nature of personal resources will be explained in depth in the following section.

The enabling resources, such as marital satisfaction and support from family and friends can help develop certain skills and abilities in one role, to help with the demands (care-giving responsibilities) from the other role. This will increase the

competence of an individual to perform both their work and life roles effectively. Psychological reward can be the positive outcome of using these resources optimally. Psychological benefits, such as motivation, self-esteem and ego gratification are associated with these rewards. These rewards emanating from the family role can lead to positive outcomes that are transferred to the work role (Voydanoff, 2005).

2.5 PERSONAL RESOURCES

According to Greenblatt's (2002) study it was evident that personal resources can balance out the conflict among work-life demands; and decrease burnout and turnover rates. If employees have high personal resources, then a company's performance is also higher. Personal resources include physical, psychological, cognitive and social resources. Physical resources include the capacity to lift something that is heavy at work or to stay awake during a late afternoon meeting. Psychological resources could be in the form of characteristics such as patience, empathy and self-esteem. The intellectual abilities an individual has, resort under their cognitive resources. Lastly social resources are the interpersonal relationships an individual will have with their family and co-workers (Greenblatt, 2002). These personal resources play an important role in a person's well-being, and are related to self-efficacy, resilience and optimism (Siu, 2013).

Xanthopoulou et al. (2007) was the first to introduce personal resources to the JD-R model. They studied how the constructs optimism, organisational-based self-esteem and self-efficacy interact with job demands and resources in predicting either work engagement or burnout. They conceptualised these three constructs as a unitary resilience construct that influences how employees function in the workplace. They wanted to test three hypothesis, firstly, whether personal resources moderate the relationship between job demands (such as workload, emotional demands, emotional dissonance, and organisational changes) and exhaustion; and secondly, whether personal resources partially mediates the relationship between job resources (such as autonomy, social support, supervisor coaching, and opportunities for professional development) and work engagement. Lastly, they wanted to test whether job demands partially mediate the relationship between personal resources and exhaustion, and whether job resources partially mediate the relationship between personal resources and work engagement. However the results of their study showed that personal

resources did not account for the relationships between job demands and exhaustion, which may be attributed to their homogenous sample (electrical engineers); that personal resources contributed significantly to explaining the motivational process of the JD-R model, and also that it played a mediating role between job resources and engagement or exhaustion. This study showed that personal resources, with job demands and job resources, contribute to the variance in exhaustion and work engagement (Xanthopoulou et al., 2007).

The COR theory principle is supported by the role personal resources play in the relationship between stressful work environments and negative outcomes. Both the COR theory and the JD-R model assume that resources play a moderating role between demands and negative outcomes. Secondly, it can be expected that job resources will lead to an accumulation of resources and thus a positive outcome will exist (Xanthopoulou et al., 2007). It is therefore important for an employee to invest in their resources to avoid negative outcomes, such as burnout (Brouze, 2013). It is further clear that more research is needed to understand the role of personal resources in the JD-R model.

2.5.1 An Overview of the Role of Personal Resources in Work-Life Conflict

Personal resources are aspects of the self, like self-efficacy, optimism and organisationally-based self-esteem (employees satisfy their needs by participating within their roles in the organisation), that are related to the resiliency construct. These personal resources may lead to greater physical and emotional well-being; and are also cultivated by the environment, meaning that personal resources may determine how people formulate, react to and comprehend environmental factors. Personal resources can either mediate or moderate the relationship between the environment and the outcome (Xanthopoulou et al., 2007). According to Cohen and Wills (cited in Schmidt & Diestel, 2012) most of the previous research focuses on the role of social support in handling job demands, rather than on personal resources. A study that focussed on personal resources specifically under nurses, found three personal resources (optimism, hardiness and emotional competence) that negatively correlated with burnout and positively correlated with engagement (Schmidt & Diestel, 2012).

With respect to the role of personal resources as moderators, a study conducted by Grau, Salnova and Peiro (Brouze, 2013) indicated that self-efficacy moderated the

stress reaction when role-conflict was high - individuals who displayed lower levels of self-efficacy had higher levels of cynicism than individuals with high levels of self-efficacy. The Xanthopoulou et al.'s (Brouze, 2013) study, however, did not find support for the moderating roles of self-efficacy and optimism in the relationship between job demands and exhaustion. Another study by Mäkikangas and Kinnunen (Xanthopoulou et al., 2007) found that an optimistic employee has lower levels of mental distress under demanding work conditions, such as high time pressure and high job insecurity. Cheung et al. (2011) claimed that PsyCap is a cognitive resource, which will have a stronger moderating effect on the stressor-cynicism relationship than the stressor-exhaustion relationship.

Regarding the possible mediating role of personal resources, previous studies showed that structural characteristics of the work environment determine the impact of an individual's personality characteristics, for example an employee with high levels of self-directedness at the workplace can move into a job that requires higher responsibilities (Xanthopoulou et al., 2007). Luthans, Norman, Avolio and Avey (Brouze, 2013) argued that PsyCap is a mediator between job resources (such as supportive organisational climate) and positive outcomes (such as better work performance). Their interpretation is that a supportive organisational climate creates the right conditions for PsyCap to flourish (Brouze, 2013). Xanthopoulou et al.'s (Brouze, 2013) study revealed that both self-efficacy and optimism mediated the relationship between job resources and work engagement.

2.5.1.1 Personality

The personality of a person explains how a person interprets a situation. A proactive person will, for instance, engage in opportunities to the fullest and will try to restructure their roles to eliminate the conflict they experience between their work and life demands (Aryee et al., 2005).

Neuroticism is one of the Big 5 personality traits, and refers to a person's emotional stability. A neurotic person tends to be very anxious and fearful of certain situations. They will interpret a situation negatively and experience high levels of stress. This level of stress will negatively influence their ability to balance the different roles and responsibilities they have, which will cause them to experience high levels of role strain and work-life conflict (Aryee et al., 2005). According to Mitchelson (2009) neurotic

people tend to have work-life conflict and will experience time-based and strain-based demands. Thus neuroticism has a positive relationship with work-life conflict (Opie & Henn, 2013).

A person who is optimistic has a natural tendency to focus on the positive outcomes of life. They have the ability to cope in stressful situations by utilising different coping strategies. It is said that an optimistic person will have low levels of work and family conflict, because they try to regulate the stress they experience from their different roles (Aryee et al., 2005).

Perfectionism is exemplified by employees who want to be the ideal person and achieve the highest standards there are. Studies found that mothers who are perfectionistic experience more emotional exhaustion at work and stress as a parent. This exhaustion and stress will lead to higher levels of work-life conflict. If a person has less tendencies towards perfectionism at home, there will be more time available to succeed at their work (Mitchelson, 2009).

The demands a person experiences have an impact on that person's mental and physical health; therefore it is important to take some time to relax. A Type A personality style is work-driven and is associated with developing a heart disease; whereas a Type B personality style is more relaxed and easy going. Nowadays Type D personality style is also used to describe people clinically. This type is associated with poor mental and physical health. An individual with a Type D personality is very pessimistic, depressed and not able to take time to relax. It is important for this Type D personality to learn how to relax, especially in today's busy work-environment (Buettner, Shattell & Reber, 2011).

2.5.1.2 Psychological capital (PsyCap)

Yardley (2012) suggested that PsyCap is a personal resource that will affect the level of burnout experienced by employees suffering from work-life conflict. When an individual has high levels of PsyCap and is faced with different demands from both work and family roles, he/she will see these two domain roles as a challenge. Such an individual will use positive coping techniques and make use of the technique of positive reframing. Positive reframing is known as redefining a demanding situation in a more positive light, this technique transforms a person's thinking pattern. In this situation an

individual will then feel capable of managing both types of demands with the right resources, and when the associated tasks have been completed successfully, they will experience a greater level of work-life balance (Siu, 2013). Psychological Capital can thus be seen as a personal resource in the job-resource model, which could assist one in handling work-life conflict before it occurs and after it has occurred.

PsyCap has been built upon an understanding of human capital that focuses on the employees' knowledge, experiences, skills and expertise. PsyCap aims to focus on who the employees are and utilises this understanding to the advantage of both the employee and the organisation through the underlying principles of positive psychology. Positive psychology focusses on the strengths, health and vitality of individuals, as opposed to the focus on illness and pathology embraced by traditional psychology. PsyCap is a four dimensional construct, referring to the individual's capacities of confidence, optimism, hope and resilience (referred to in literature by the acronym HERO, which refers to Hope, Efficacy, Resilience and Optimism) (Luthans, Luthans & Luthans, 2004). PsyCap is beneficial in an organisation, as it is believed to enhance the employee's job performance, organisational citizenship behaviour, job satisfaction, psychological and physical well-being, and improve their commitment towards the organisation (Siu, 2013). According to Yardley (2012) there is a lack of evidence regarding the role of PsyCap in work-life conflict. It is, however, suggested that PsyCap will act as a buffer against the effects of work-life conflict (Yardley, 2012).

2.5.1.3 The HERO construct

PsyCap has been defined as: "an individual's positive psychological state of development that is characterized by (a) having confidence (efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (b) persevering toward goals, and, when necessary, redirecting paths to goals (hope) in order to succeed; (c) making a positive attribution (optimism) about succeeding now and in the future; and (d) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success" (Luthans, Youssef & Avolio, 2007, p. 3).

PsyCap is an emerging field in positive psychology (focusing more on strengths, health and growth) and also in the recently defined new field of positive organisational behaviour (POB) in the workplace. POB can be defined as "the study and application of positively orientated human resource strengths and psychological capacities that

can be measured, developed, and effectively managed for performance improvement in today's workplace" (Youssef & Luthans, 2007, p. 775). For a psychological construct to be included in the POB construct it must meet the following criteria: "(a) The capacity must be theory and research based and validly measurable, and (b) the capacity must also be 'state-like' (i.e., open to change and development) and have a demonstrated performance impact" (Youssef & Luthans, 2007, p. 775). Luthans et al. (2007) stated that the positive PsyCap constructs of self-efficacy, hope, optimism and resilience correspond to the POB criteria.

According to Luthans et al. (2007) self-efficacy is described as an individual's ability to mobilise resources (motivational and cognitive resources) in order to develop a plan of action to execute a specific task (Stajkovic & Luthans, 1998). Bandura (1997) has stated that self-efficacy can improve work performance in the organisation. Self-efficacy in the workplace occurs when the individual has enough confidence to make use of their resources to successfully execute a job task (Kemp, 2013). Employees who display self-efficacy are more positive about their work, are effective leaders, are more creative and innovative, and are engaged in their work (Kemp, 2013).

Optimism has been defined by Seligman (2002) as a two-dimensional construct comprising of permanence and pervasiveness. Permanence is when an optimistic individual interprets negative events as temporary, while a pessimistic individual interprets them as permanent. Regarding pervasiveness, an optimist will make specific attributions to negative events and a pessimist will make universal attributions to these events. This means that an optimistic individual will compartmentalise helplessness and will allow good things to brighten up their lives and a pessimistic individual will see failure in one area of life as failure in their life as a whole. Luthans et al. (2004) has provided evidence that optimism has a positive influence on performance. As previously mentioned an optimistic individual will have lower levels of work-life conflict. An optimistic employee is less likely to give up, is more satisfied and committed to job performance (Kemp, 2013).

Hope is defined as "a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-oriented energy) and (b) pathways (planning to meet goals)" (Luthans et al., 2004, p. 47). This construct is not theoretically as rich as the other dimensions, but evidence exists to prove its

independent contribution to PsyCap (Luthans et al., 2004). In an organisation hope helps an employee to focus their energy towards organisational goals and creating pathways to achieve these goals. A hopeful individual will be motivated to succeed in their goals and have multiple ways of attaining their goals (Kemp, 2013).

Resilience can be clarified as: “an ability of individuals (a) to cope and adapt successfully to situational discontinuities and risk environments (b) to overcome or ‘bounce back’ from disadvantageous circumstances, risk, and adversity and (c) to draw on inner strengths, skills, and support in order to maintain psychological well-being and health” (Kotzé & Lamb, 2012, p. 299). Resilience is a much needed skill for employees to possess in the modern ever-changing workplace. It is also evident that resilience shows the potential to have a positive impact on workplace performance (Luthans et al., 2004). Resilience is the ability to bounce back from any adversity and failure in the workplace (Kemp, 2013).

PsyCap can therefore be characterised as (a) having confidence to attempt challenging tasks, (b) having a positive attribution about success, (c) having multiple goals (hope) in order to succeed and (d) bouncing back from failure to attain success (resilience). The four constructs (HERO) are personal resources for an individual to balance work/life demands (Siu, 2013). In a study conducted by Siu (2013) among Chinese employees PsyCap had a positive correlation with their work and physical well-being and with high levels of job satisfaction. In a study conducted by Youssef and Luthans (2007) the dimension hope of PsyCap was positively related to the following work-related outcomes: job performance, job satisfaction, happiness and commitment to the organisation; optimism was positively related to the following work-related outcomes: job performance, job satisfaction and happiness, and lastly resilience was positively related to the following work-related outcomes: job satisfaction, happiness and commitment to the organisation.

PsyCap is seen as a personal resource that can be used to enhance the levels of success under employees in the workplace. The JD-R model emphasises how job demands can influence the employee by exhausting them; thus if a person has PsyCap as a resource it will help the individual to combat job demands. This could lead to reduced levels of work-life conflict. The four dimensions of PsyCap are

malleable, meaning that they are open and changeable. Therefore an organisation can help the employees who experience work-life conflict to develop the four elements to enhance their well-being and decrease stress and absenteeism. If we have to describe PsyCap on a state or trait-like continuum, it will be more state-like, because it is changeable and more specific to certain situations (Yardley, 2012).

The question regarding why some nurses can cope with the stress and challenges they face every day, could be answered by referring to the personal resource PsyCap. PsyCap can be seen as a personal resource for nurses in dealing with challenging conditions and protecting them from negative outcomes, such as work-life conflict (Teo, Roche, Pick & Newton, 2014). According to Spence Laschinger and Fida (2014), Avey, Luthans and Jensen's study had found that PsyCap can be a buffer against the work stressors of the nursing environment. In Theo et al.'s (2014) study they also found that PsyCap helps to reduce the role stress levels nurses are experiencing. Also in this study it was suggested that nurses make use of their personal resources to handle the challenges of their job demands. A high level of PsyCap leads to high job satisfaction under newly graduated nurses (NGN's) (Pineau Stam et al., 2015). Thus it is evident that nurses who display characteristics of hope, optimism, self-efficacy and resilience in times of stress and strain will retain their well-being and overcome challenging situations (Theo et al., 2014). As seen in the previous paragraphs, PsyCap is a buffering technique that can reduce the effect of job demands, and reduce work-life conflict among employees, thus PsyCap can be a moderator variable in the present study.

Hypothesis 13: PsyCap moderates the impact of job and family demands (role overload, emotional labour, care-giving responsibilities) on the WLC of nurses.

2.5.2 The Impact Personal Resources has on Work-Life Conflict

In the JD-R model work-life conflict could be viewed as at least partially due to job demands like work overload, inflexible working hours and unsupportive co-workers and supervisors. This model can be used to explain how work-life conflict leads to negative work outcomes. A lack of resources, such as the personal resource of PsyCap, can detract from an individual's performance. Within the JD-R model PsyCap's four dimensions, namely hope, optimism, self-efficacy and resilience are considered to buffer the effect of job demands on work outcomes. PsyCap's four

dimensions can thus be viewed as personal resources that could reduce the negative effects of job demands, such as work-life conflict. High work demands, where the person is unable to recover, lead to stress, disengagement and eventually burnout. Personal resources can assist a person, who has many job demands and family demands, to manage the demands. Individuals with high levels of autonomy will have a positive spill-over effect onto their family demands. If an individual learns skills, such as time management at work, they can utilise it in their home environment as well. Examples of job resources that can help to provide a balance between work and life demands are skill discretion, job security and schedule control (Yardley, 2012).

There is little empirical evidence that shows that there is a relationship between PsyCap and work-life conflict. Liu, Chang, Fu, Wang and Wang (2012) stated that PsyCap can be a positive resource to reduce levels of work-life conflict. An individual that has high levels of hope, optimism, self-efficacy and resilience will experience these personal resources as a buffer against high levels of conflict between job and family demands (Yardley, 2012). According to Wang, Liu, Wang and Wang (2012) PsyCap was a mediating factor in the relationship between work-family conflict and the professional efficacy component of burnout under male doctors. They also found that PsyCap was a mediating factor between family-work conflict and all three components (emotional exhaustion, cynicism and professional efficacy) of burnout under female doctors. Other research has found a relationship between PsyCap and job performance and a relationship between quality of work-life and job performance (Wang et al., 2012; Nguyen & Nguyen, 2012).

A study conducted by Liu et al. (2012) investigated whether PsyCap mediates the relationship between work-life conflict and burnout and found that work-life conflict was associated with burnout among Chinese doctors. They further found that the relationship was moderated by PsyCap. Liu et al. (2012) suggested that PsyCap is a positive resource that will lead to a reduction in the negative effects work-life conflict has on an individual. Yardley (2012) also agreed that PsyCap could be utilised as a buffer against the negative effects of work-life conflict. An individual who has high levels of optimism, self-efficacy, hope and resilience, will have lower levels of job stress and burnout (Yardley, 2012).

Schaufeli and Salanova (2011) stated that employees with low levels of PsyCap can be linked to burnout. When employees invest resources such as time and effort into their job, without getting the appropriate recognition, they may experience exhaustion, leading to burnout due to their extensive usage of resources. According to Yardley (2012), if an employee does not have the mechanism of PsyCap to help them overcome negative situations, and a cognitive inability to reframe negative situations into positive situations, the employee will suffer from burnout. Individuals with higher levels of PsyCap will have lower levels of job stress and possibly even thrive in an environment of high job stress. Individuals with self-efficacy will be able to deal with job stress, because they are more confident to deal with a challenging situation. A person with optimism is less likely to experience symptoms of stress; and the dimension hope will help a person to deal with stressful situations at work or at home. Lastly, resilience will help an individual to recover from a stressful situation and deal with such a situation faster, and the person will be more open to a changing environment (Yardley, 2012). Cheung et al. (2011) found that employees under emotional stress, who have high levels of PsyCap, reported lower levels of cynicism.

Research generally shows that PsyCap reduces burnout among individuals. Wang et al. (2012) also found that PsyCap is a mediator between work-life conflict and burnout under nurses. According to Yardley (2012) an individual with high levels of PsyCap will see work-life conflict as a challenge and will overcome it and not develop burnout. The study conducted by Wang et al. (2012) among nurses found that the level of burnout experienced by employees suffering from work-life conflict is lower if they have PsyCap as a personal resource. More specifically their study revealed that PsyCap partly mediated the effect of work-to-life interference on emotional exhaustion and cynicism; and PsyCap partly mediated the effect of life-to-work interference on emotional exhaustion, cynicism and professional efficacy. PsyCap therefore do not only influence the likelihood that a person will experience work-life conflict, but it also influences whether the work-life conflict experienced will lead to burnout.

The following hypothesis can thus be formulated:

Hypothesis 14: PsyCap moderates the impact of WLC on burnout among nurses.

2.6 THE THEORETICAL MODEL AND THE STRUCTURAL MODEL

In the following section the theoretical model underlying the current study and the eventual structural model are presented.

2.6.1 Theoretical model

Figure 2.3 represents a summary of the most salient variables encountered in the literature review for this study.

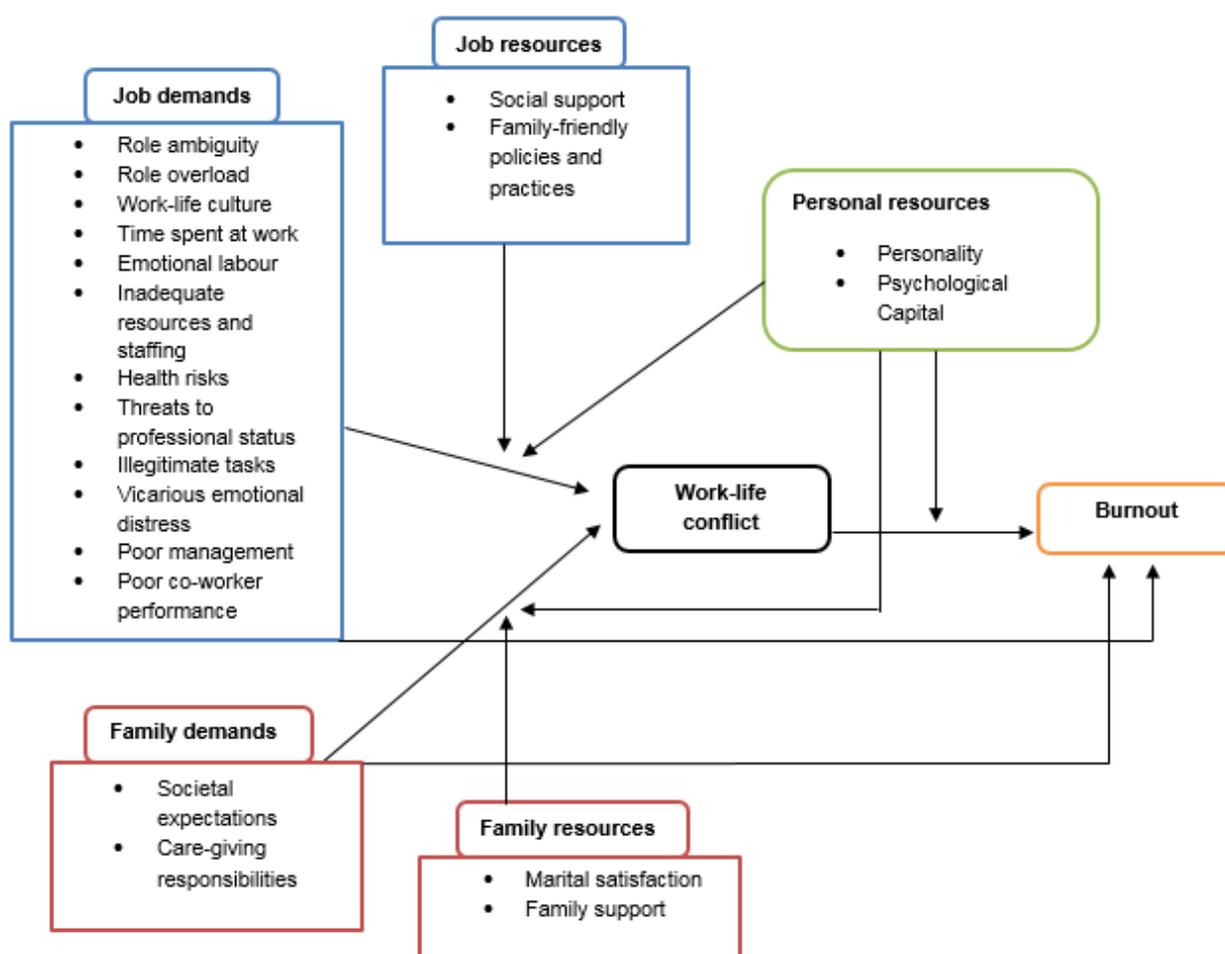


Figure 2.3. Theoretical Model Underlying this Research Study

2.6.2 The structural model

The research initiating question of this research proposal asked **why variance in work-life conflict and the impact thereof on burnout exists amongst nurses working in the same organisational contexts/hospitals in South Africa.**

A theoretical argument was developed in the literature study in an attempt to answer the research initiating question of this study. The response to the initiating question was refined through theorising. This response can be summarised in the form of the structural model presented. The structural model represents a schematic representation of the hypotheses that have been constructed as an answer to the research initiating question through theorising.

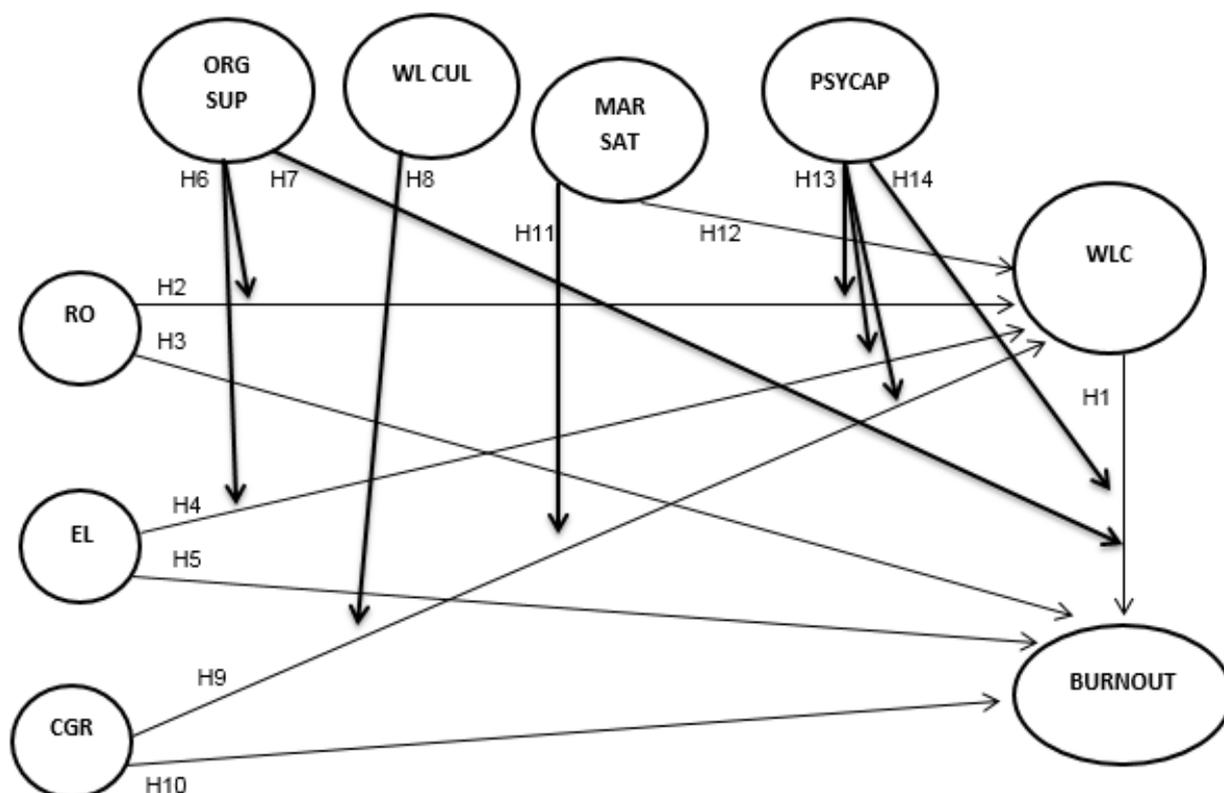


Figure 2.4. Structural Model Depicting the Most Salient Variables Impacting upon WLC and its Effect on Burnout

These variables were chosen to be studied in a nursing environment. Nurses have a physically and emotionally demanding job that may lead to burnout, thus role overload (RO) will represent all the physically demanding challenges a nurse may experience, such as the long working hours, the amount of work and the pace of work they must perform daily. Emotional labour (EL) represents how nurses regulate their feelings, associated with the emotional interactions a nurse has to deal with on a daily basis in their work routine.

Research has shown that job resources may help to deal with certain job demands. Organisational support (ORG SUP) from both the organisation and co-workers can help the nurses in dealing with the emotional and physical aspects of their work. Where the work-life culture (WL CUL) represents a supportive environment the employees will be more dedicated to the organisation and it will help them to recover from the negative work-life conflict consequences.

The aim is to determine why variance in work-life conflict exists among nurses, which is why we will also look at the family resources impacting on work-life conflict. There is a lack of research with respect to the family domain, and we chose to look at marital satisfaction/support (MAR SAT) (as a family resource) and care-giving responsibilities (CGR) (as a family demand), especially in the nursing profession which is a female dominated profession. Lastly we will look at the personal resource psychological capital (PSYCAP), which may be the reason why some nurses deal more efficiently with work-life conflict before and after it has occurred, with the result that they do not experience burnout.

It is important to acknowledge that these resources could, apart from their direct relationships, also moderate both the relationship between the Demands and WLC and the relationship between WLC and Burnout, especially the job/family resources and PsyCap. Inspection of the structural model reveals the necessity to formulate an additional hypothesis, namely:

Hypothesis 15: WLC mediates the relationship between role overload and burnout among nurses.

Hypothesis 16: WLC mediates the relationship between emotional labour and burnout among nurses.

Hypothesis 17: WLC mediates the relationship between care-giving responsibilities and burnout among nurses.

2.7 SUMMARY

In this chapter the focus was on providing an overview of previous research on the specific variables, such as the different demands, that may result in work-life conflict and its impact on burnout, and on resources that may have a buffering effect on the

demands and assist nurses in overcoming work-life conflict and help them to ultimately flourish in their job and family life. The focus was placed on the JD-R model, by looking at some job demands and job resources nurses may have, and the effect that it may have on the level of work-life conflict and burnout they experience. It was also important to look at the role that family demands and family resources may play in the experience of work-life conflict and burnout among nurses. PsyCap was identified as a personal resource that plays a vital role in effecting job and family demands positively and mediating the effect of work-life conflict. Empirical results support the relationships between these variables, namely burnout, work-life conflict, job demands and resources, family demands and resources and PsyCap, and consequently a structural model was created to provide a schematic representation of all the hypotheses. The research methodology utilised to evaluate the structural model will be described in Chapter 3.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Following the literature review chapter, this chapter will describe the research methodology of the present study. The methodology used to test the structural model must be chosen carefully because it plays a vital role in maximising the probability of valid findings. The first part of the chapter will focus on the structural model and the substantive research hypotheses. The next part will describe the research design of this study, the recruitment of the participants, as well as the research procedures. An overview of the different measurement instruments utilised will follow, which will then also serve the purpose of operationalising the latent variables. In conclusion, the statistical analysis utilised in this study will be explained.

3.2 STRUCTURAL MODEL

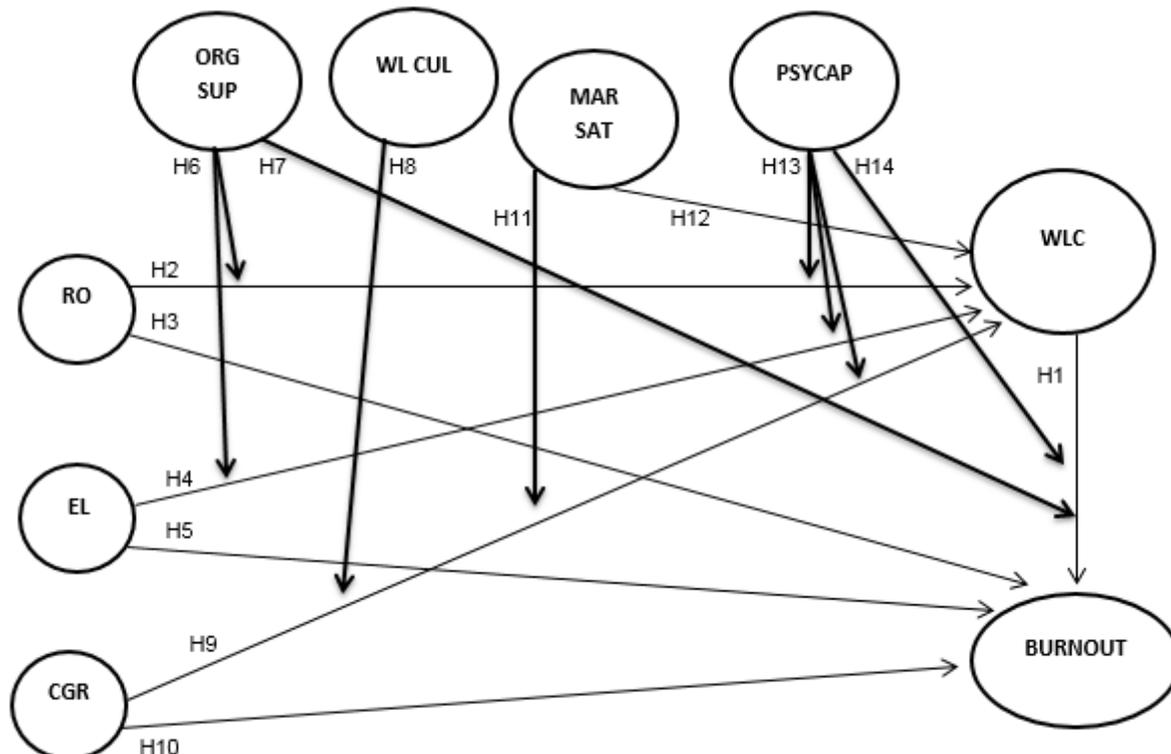


Figure 3.1. Structural Model of Work-Life Conflict and its Role in Burnout

The structural model (Figure 3.1) represents the substantive research hypotheses for the study. All the latent variables that are included in the structural model are portrayed in Table 3.1. The latent variables and interaction effects can be summarised by the following:

Table 3.1

Summary of Latent Variables

<i>Latent variables and interaction</i>	
WLC	Work-life conflict
RO	Role overload
EL	Emotional labour
ORG SUP	Organisational support
WL CUL	Work-life culture
CGR	Care-giving responsibilities
MAR SAT	Marital satisfaction
PSYCAP	Psychological capital
—→	Interaction effect
→	Moderation effect

3.3 SUBSTANTIVE RESEARCH HYPOTHESES

The chosen research methodology should reflect the research goal of the study. As earlier mentioned, the goal was to investigate why variance in work-life conflict and the impact thereof on burnout exists amongst nurses working in the same organisational contexts/hospitals in South Africa. For this purpose 17 more clearly specified path-specific research hypotheses were formulated:

Hypothesis 1: In the proposed structural model it is hypothesised that WLC has a significant positive relationship with burnout experienced by nurses.

- Hypothesis 2:** In the proposed structural model it is hypothesised that role overload has a significant positive relationship with WLC among nurses.
- Hypothesis 3:** In the proposed structural model it is hypothesised that role overload has a significant positive relationship with burnout among nurses.
- Hypothesis 4:** In the proposed structural model it is hypothesised that emotional labour has a significant positive relationship with the level of WLC experienced by nurses.
- Hypothesis 5:** In the proposed structural model it is hypothesised that emotional labour has a significant positive relationship with the level of burnout experienced by nurses.
- Hypothesis 6:** In the proposed structural model it is hypothesised that organisational support (from co-workers and supervisors) moderates the impact of the job demands, role overload and emotional labour, on WLC among nurses.
- Hypothesis 7:** In the proposed structural model it is hypothesised that organisational support (from co-workers and supervisors) moderates the impact of WLC on burnout among nurses.
- Hypothesis 8:** In the proposed structural model it is hypothesised that a supportive work-life culture moderates the impact of care-giving responsibilities on the WLC of nurses.
- Hypothesis 9:** In the proposed structural model it is hypothesised that care-giving responsibilities has a significant positive relationship with the WLC among nurses.
- Hypothesis 10:** In the proposed structural model it is hypothesised that care-giving responsibilities has a significant positive relationship with burnout among nurses.

- Hypothesis 11:** In the proposed structural model it is hypothesised that marital satisfaction moderates the impact of care-giving responsibilities on WLC among nurses.
- Hypothesis 12:** In the proposed structural model it is hypothesised that marital satisfaction has a significant negative relationship with the WLC among nurses.
- Hypothesis 13:** In the proposed structural model it is hypothesised that PsyCap moderates the impact of job and family demands (role overload, emotional labour, care-giving responsibilities) on the WLC of nurses.
- Hypothesis 14:** In the proposed structural model it is hypothesised that PsyCap moderates the impact of WLC on burnout among nurses.
- Hypotheses 15:** In the proposed structural model it is hypothesised that WLC mediates the relationship between role overload and burnout among nurses.
- Hypotheses 16:** In the proposed structural model it is hypothesised that WLC mediates the relationship between emotional labour and burnout among nurses.
- Hypotheses 17:** In the proposed structural model it is hypothesised that WLC mediates the relationship between care-giving responsibilities and burnout among nurses.

3.4 RESEARCH DESIGN

A research design can be described as an investigative plan used to search for the answers to the different research questions/hypotheses. The research design is chosen by considering the following aspects of the study: the research initiating question, the research goal, and the empirical evidence required to test the hypotheses. The research design must represent the most adequate operations to

perform to test the hypotheses under the specific conditions (Bless, Higson-Smith & Kagee, 2006).

The research design utilised in this study was quantitative exploratory research. Quantitative research relies on measurements to analyse the different variables and enables the empirical collection of the data from a large sample of respondents. The term *exploratory research* refers to the researcher investigating a problem that has not been clearly identified, where the focus is on gaining an understanding of a problem or phenomenon (Bless et al., 2006). To discover whether there is a relationship between the different variables, a correlational research approach was used. In a correlational research approach there can be three possible results of an analysis, namely a positive correlation, a negative correlation and no correlation (Cherry, 2013). The research design followed a post hoc non-experimental research design, by which the researcher had analysed the data collected after the study has been concluded, without manipulating or controlling the variables in any way (Bless et al., 2006).

The proposed research design for this study was the ex post facto correlation design. An ex post facto correlational design is the best research design to follow in a non-experimental approach (Simon & Goes, 2013). This design was ideal for this study, because there were no manipulation of the characteristics of the human participants in this study. Burger (2011) stated that the ex post facto design is a systematic empirical inquiry, where a researcher has no direct control over the independent variables, thus experimental manipulation and random assignment are not possible.

Ex post facto research has three weaknesses according to Kerlinger and Lee (2000), namely the inability of a researcher to influence the independent variables, the inability to randomise and the risk of a poor interpretation of the results. Kerlinger and Lee (2000) therefore propose that the ex post facto research design results must be handled with caution. The value of this research design lies in the fact that most research in social sciences fails to lend itself to experimentation. Despite the ex post facto correlational design's problems with respect to controlling the extraneous variance, it is still regarded as extremely valuable for this study. This design adds value in most research in the field of Industrial Psychology and other social sciences in which the variables cannot be manipulated.

3.5 SAMPLING PROCEDURE

The units of analysis for this study were nurses, who are in a long-term relationship and/or married, at a Hospital situated in the Free State, South Africa. It is one of the largest private hospitals in South Africa, and is recognised in the health industry as a high calibre healthcare facility. The Human Resource Manager was approached to discuss the possibility of collecting the data for this study. The HR manager then approached the hospital board to gain permission for this study, which was granted. The surveys (that were in sealed envelopes) were handed out to the nurses on duty to complete. An informed consent letter was attached to the survey and the nurses were informed that they may chose to participate or not (in which case they would simply return the envelope unopened). In the end, a final sample of 106 from the hospital completed the questionnaire.

3.5.1 Sample Size

The investigation utilised a non-probability sampling technique, namely convenience sampling in which each subject of the population is selected because of their convenient accessibility, until the sample has reached the desired size. This means that there is no assurance that each member in the population has an equal chance of being included. A few advantages of non-probability sampling (convenience sampling) are that it is quick, inexpensive and adequate for homogeneous populations (Bless et al., 2006). Non-probability sampling was chosen because the necessary namelist of the population (the nurses) is unknown and the easiest approach was to go to the specific hospital and request the nurses on duty to complete the survey.

When using the PLS (Partial Least Squares) approach to SEM (Structural Equation Modelling) the following factors must be taken into account when determining the appropriate sample size: the significance level, the statistical power, the minimum coefficient of determination (R^2 values) required and the number of arrows pointing at the latent variables. When taking into account all of the above considerations, a sample of 100-200 individuals is considered optimal in this study for the PLS approach to SEM to succeed (Kwong-Kay Wong, 2013). A final sample of 106 nurses from the hospital completed the questionnaire. The demographic information regarding the sample is provided in Table 3.2.

Table 3.2***Biographical Information of the Sample Population (N=106)***

Gender		
<i>Variables</i>	<i>Frequency</i>	<i>Percentage</i>
Female	90	85%
Male	16	15%
Age		
<i>Minimum, maximum</i>	<i>Mean</i>	<i>Standard deviation</i>
19, 62	41	11.5
Ethnic group		
<i>Variables</i>	<i>Frequency</i>	<i>Percentage</i>
African	36	34%
Coloured	16	16%
White	54	51%
Marital Status		
<i>Variables</i>	<i>Frequency</i>	<i>Percentage</i>
Married	68	64%
In a long-term relationship	38	36%
Employment status of spouse		
<i>Variables</i>	<i>Frequency</i>	<i>Percentage</i>
Employed	94	89%
Unemployed	12	11%
Number of child dependants		
<i>Minimum, maximum</i>	<i>Mean</i>	<i>Standard deviation</i>
0, 7	1	1.18
Number of adult dependants		
<i>Minimum, maximum</i>	<i>Mean</i>	<i>Standard deviation</i>
0, 6	0.57	1.01
Nursing category		
<i>Variables</i>	<i>Frequency</i>	<i>Percentage</i>
Enrolled Auxiliary	10	9%
Enrolled	18	17%
Professional/registered	55	52%
Senior professional/registered	19	18%
Other	4	14%

3.6 MEASURING INSTRUMENTS

The self-compiled questionnaire assessed the different variables as hypothesised in the structural model and was obtained either by utilising assessment instruments that were available for use in the public domain or by obtaining permission to use the items from the original authors of the instruments. In this study only the Psychological Capital Questionnaire needed permission by the original authors (Mind Garden). The rest of the instruments/questionnaires were obtained in the public domain.

3.6.1 Demographic Data

The demographical data was gathered to obtain information on various variables that are useful for categorising individuals into groups of respondents. The questionnaire included items that measure categorical variables, ranging from gender, age, ethnic group, marital status, employment status of spouse, number of dependents (children and adults), to the registered nursing category they fall in. With this demographic questionnaire we also extracted the information required for the care-giving responsibilities of the nursing staff.

3.6.2 Work-life Conflict

In this study work-life conflict was measured by using the two negative subscales of the the Survey Work-Home Interaction Nijmegen instrument (Geurts, Taris, Kompier, Dijkers, Van Hooff & Kinnunen, 2005). The researcher initially intended using the NWHI and NHWI consecutively as latent variables, as the nomological network of variables was expected to show different relationships with these two intermediate dependent variables. The statistical pragmatics of comparing two different models versus a single model, including both these variables as latent variables, were evaluated and the decision was to use NWHI and NHWI as manifest variables of the latent variable Work-life conflict.

3.6.2.1 Nature, composition and administration of the measurement

Work-life interference was measured with the Survey Work-Home Interaction Nijmegen (SWING) instrument developed by Wagena and Geurts at the Radboud University in Nijmegen, Netherlands (Mostert & Oldfield, 2009). The SWING

instrument differentiates between the interferences from home and work roles. Four factors are measured, namely: negative work-home interference (NWHI) (e.g. "your work schedule makes it difficult to fulfil domestic obligations"), positive work-home interference (PWHI) (e.g. "you come cheerfully home after a successful day at work, positively affecting the atmosphere at home"), negative home-work interference (NHWI) (e.g. "you have difficulty concentrating on your work because you are preoccupied with domestic matters") and positive home-work interference (PHWI) (e.g. "you are better able to interact with your colleague/supervisor as a result of the environment at home") (Pieterse, 2004). Originally the SWING consisted of 27 items, but was then changed to 22 items, because 5 problematic items were removed (Mostert & Oldfield, 2009). Pieterse and Mostert (2005) extracted four factors with factor analysis, thus the four interference subscale factors of this questionnaire, is namely NWHI (eight items: item 1-8), NHWI (four items: item 9-12), PWHI (five items: item 13-17), and PHWI (five items: item 18-22). It is very effective as it captures the positive and negative dimensions of the work-life interference, as well as the direction and degree of influence between work and home functioning. These four factors are measured, with a response scale ranging from never (0) to always (3). A high score refers to a considerable interaction (Mostert & Oldfield, 2009).

3.6.2.2 Psychometric properties of the SWING

Pieterse (2004) found the SWING to be a very reliable and valid instrument for measuring work-life interaction in Southern Africa. The alpha scores for each of the four scales of interaction were NWHI = .87, NHWI = .79, PWHI = .79 and PHWI = .76 respectively. Geurts et al. (2005) reported similar findings in their study, as they also obtained significant internal consistencies for each of the four scales of interaction, namely NWHI = .84, NHWI = .75, PWHI = .75 and PHWI = .81. Pieterse and Mostert (2005) also obtained reliable Cronbach Alpha coefficients for the SWING dimensions, namely .87 for NWHI; .79 for PWHI; .79 for NHWI and .76 for PHWI. Thus the Cronbach alpha coefficients are acceptable for all four factors. Geurts et al. (2005) examined the construct validity of the SWING 22 item questionnaire by comparing it with three competing models, the results showed that the SWING model fitted their data the best and also identified the four subscales of interference.

3.6.3 Job Demand-Resource Scale (JDRS)

Job demands and job resources were measured with the Job Demands-Resource Scale (Jackson & Rothmann, 2005). In the following overview the focus will be placed upon the nature, composition, administration and psychometric properties of this instrument.

3.6.3.1 Nature, composition and administration of the measurement

The JDRS was originally developed by Jackson and Rothmann on the basis of literature reviews and interviews with focus groups. This questionnaire measures the job demands and job resources an employee may be exposed to. There are different versions of the JDRS. The contextualised questionnaire (the JDRS model was used as a theoretical framework to develop the appropriate measuring instrument) consists of 67 items, and has a four-point scale with response options ranging from never(1) to always(4) (Jackson & Rothmann, 2005; Rothmann et al., 2006; Rothmann & Joubert, 2007). The following are the dimensions the Job Demand-Resource Scale measures: “pace, amount and variety of work, physical, mental and emotional workload, opportunities to learn, work independence, relationships with colleagues and immediate supervisor, ambiguities of work, information, communications, participation, contact possibilities, uncertainty about the future, remuneration and career possibilities” (Rothmann & Joubert, 2007, p. 52).

3.6.3.2 Psychometric properties of JDRS

This scale was developed and checked for face validity (Rothmann et al., 2006). Jackson and Rothmann (2005) found that the dimensions of the JDRS, as mentioned above, consisted of seven reliable factors, namely organisational support (.88), growth opportunities (.80), overload (.75), job insecurity (.90), relationship with colleagues (.76), control (.71), and rewards (.78) (The values in brackets represent the alpha coefficients of these scales).

In a study conducted by Rothmann and Jordaan (Roux, 2014) they extracted six factors, namely, organisational support, growth opportunities, overload, social support, advancement and job insecurity. Whereas Rothmann and Jordaan extracted six

factors, Jackson, Rothmann and van de Vijver (Roux, 2014) extracted four factors that explained 40% variance in their study, and after the second order principal component analysis two factors explained 73.99% of the variance. Overload was the first factor (named job demands), and the second factor comprised of organisational support, growth opportunity and advancement (named job resources).

The subscales that were used in the current study were the overload subscale (mental and emotional) that encompasses physical, cognitive and emotional loads and the organisational support subscale that encompasses relationships with supervisors, communication channels and social support from colleagues

Regarding the stability of the construct, the JDRS showed a stable factor structure across the different organisations in South Africa (Rothmann et al., 2006).

3.6.4 Copenhagen Burnout Inventory (CBI)

This study used the CBI (Borritz & Kristensen, 2004) to measure burnout. In the following overview the focus will be placed upon the nature, composition, administration and psychometric properties of this instrument.

3.6.4.1 Nature, composition and administration of the measurement

The CBI is an instrument that measures burnout, specifically exhaustion and fatigue. The structure of the CBI contains three scales, namely personal burnout, work-related burnout and client-related burnout (Kirstensen, Borritz, Villadsen & Christensen, 2005). Personal burnout can be defined as: “the degree of physical and psychological fatigue and exhaustion experienced by the person” (Kirstensen et al., 2005, p. 197). The next dimension, work-related burnout is described as: “The degree of physical and psychological fatigue and exhaustion that is perceived by the person as related to his/her work” (Kirstensen et al., 2005, p. 197). The last dimension, client-related burnout, represents “the degree of physical and psychological fatigue and exhaustion that is perceived by the person as related to his/her work with clients” (Kirstensen et al., 2005, p. 197). The CBI can be applied to different domains and occupations. Borritz, Rugulies, Bjorner, Villadsen, Mikkelsen and Kirstensen (2006) stated that the client-related dimension may refer to patients, students, children, etc. The CBI consists

of 19 items and each item has five response categories, which is rescaled to a 0-100 metric, containing the values of: 0, 25, 50, 75, and 100. A sample question of personal burnout is as follows: “How often are you emotionally exhausted” and of work-related burnout: “Does your work frustrate you”, and lastly client-related burnout is: “Do you find it hard to work with clients” (Borritz et al., 2006). The current study utilised the total score for all three scales.

3.6.4.2 Psychometric properties of CBI

The CBI was developed in a Danish study (N=1917; 83% women), that focused on the determinants and consequences of burnout in human service work organisations (this study was called the PUMA study) (Borritz et al., 2006). In the PUMA study the Cronbach alpha’s for the personal burnout and work-related burnout scales were .87, and for client-related burnout .85 (Meyer, 2008). A correlation coefficient of .72 was reported between the personal burnout scale and the work-related burnout scale; and a correlation of .46 between the personal burnout scale and the client-burnout scale; and lastly a correlation of .61 between work-related burnout and client burnout. This shows there are some differences between the three scales (Kirstensen et al., 2005). In Kirstensen et al.’s (2005) study, the scales also showed face validity and criterion validity, namely convergent validity. In a South Africa study conducted by Meyer (2008) the Cronbach alpha’s of the personal burnout scale was .76, and for work-related burnout .77, and for client-burnout the alpha was .75.

3.6.5 Psychological Capital

In this study psychological capital was measured with the Psychological Capital Questionnaire (Luthans, Avolio & Avey, 2007). In the following overview the focus will be placed upon the nature, composition, administration and psychometric properties of this instrument.

3.6.5.1 Nature, composition and administration of the measurement

Psychological Capital was measured with a 24 item Psychological Capital Questionnaire (PCQ). This form of the measure is normally used in psychological research. Each domain is measured by 6 items. Here are some sample items

measuring self-efficacy (e.g. “I feel confident in representing my work area in meetings with management”); optimism (e.g. “I always look on the bright side of things regarding my job”); and resilience (e.g. “I usually take stressful things at work in my stride”). The respondents will indicate their agreement with these statements on a 6-point Likert scale (1- Strongly disagree and 6-Strongly agree). A high score on this measurement indicates a high level of PsyCap (Yardley, 2012). The total score for PsyCap was utilised in the final analysis for this study.

3.6.5.2 Psychometric properties of PCQ

The Cronbach alpha for the total scale is .94. The Cronbach’s alpha for the self-efficacy scale is .84; for hope it is .83; for optimism .79; and for resilience .79 (Yardley, 2012). Liu et al. (2012) reported similar findings for the Cronbach alphas of self-efficacy, hope, resilience, and optimism. In their sample the respective coefficients were .90 (self-efficacy), .89 (hope), .84 (optimism), and .83 (resilience) for male physicians and .88 (self-efficacy), .88 (hope), .85 (optimism), and .85 (resilience) for female physicians. For the total scale, the Cronbach’s alpha was .95 for male physicians and .94 for female physicians (Liu et al., 2012). Luthans, Avolio, Avey and Norman (2007) confirmed the reliability and construct validity of the PCQ. Evidence of the internal validity (specifically construct and discriminant validity), reliability and external validity (revealing a relationship with the following theoretically relevant variables namely stress, burnout and work engagement) was provided by research done recently in a South African context (Görgens-Ekermans & Herbert, 2013). The Cronbach alphas that were reported in a South African study were .87 for hope, .78 for optimism, .72 for resilience and .87 for self-efficacy. Acceptable reliability coefficients for the four dimensions of the PCQ have also been found in another South African study, with the alpha coefficients ranging from .67 to .83 (Simons & Buitenbach, 2013).

3.6.6 Emotional Labour Scale (ELS)

This study used the ELS to measure emotional labour (Brotheridge & Lee, 2003). In the following overview the focus will be placed upon the nature, composition, administration and psychometric properties of this instrument.

3.6.6.1 Nature, composition and administration of the measurement

The ELS was developed by Brotheridge and Lee (Al-Serkal, 2006), and it is argued that the ELS is in agreement with the literature, namely that emotional labour must be viewed and measured as a multidimensional construct. The overall aim in the development of the ELS was that the items of the measurement should be simple and brief, not taking up a lot of a respondent's time. In their initial study the ELS contained 19 items, after principal factor extraction, with varimax rotation, for all the scales, a 15 item ELS instrument was developed in their second study (Brotheridge & Lee, 2003). The items are based upon the literature on emotional labour, such as regulating emotions, hiding emotions, and faking and modifying emotions in a job (Van Gelderen, Konijn & Bakker, 2011). The response options to this scale are on a 5 point Likert scale with 1 representing "never", 2 representing "rarely", 3 representing "sometimes", 4 representing "often", and 5 representing "always" (Brotheridge & Lee, 2003). Some example questions are: 'Show some strong emotions' (intensity item); 'Try to actually experience the emotions that I must show' (deep acting item); 'Pretend to have emotions that I do not really have' (surface acting item) (De Villiers, 2015).

3.6.6.2 Psychometric properties of ELS

There are different versions of the ELS. The ELS used in this study was the 14 item survey of the ELS. This version has the sub-dimensions of frequency (questions 1-3), intensity (questions 4-5), variety (questions 6-8), deep acting (question 9-11) and surface acting (questions 12-14) (De Villiers, 2015). Van Gelderen et al. (2011) stated that alpha for the three items of deep acting was .84, and the alpha for the five items of surface acting was .74. The ELS items all load onto their latent variables in the Brotheridge and Lee (2003) study, demonstrating the unidimensionality of each factor. The subscales demonstrated internal consistency (Cronbach's alpha values ranged from .58 to .85) (Al-Serkal, 2006).

3.6.7 Marital Satisfaction

This study used the ENRICH (Enriching and Nurturing Relationship Issues, Communication and Happiness) Marital Satisfaction Scale (EMS) to measure marital or long-term relationship satisfaction/quality (Fowers & Olson, 1993). In the following

overview the focus will be placed upon the nature, composition, administration and psychometric properties of this scale.

3.6.7.1 Nature, composition and administration of the measurement

The ENRICH scale was developed through extensive empirical analysis by Fournier, Olson and Druckman for research and clinical use. The ENRICH questionnaire consists of 12 subscales; these subscales help to identify possible problems in a marriage (Van der Poel, 2000). The EMS Scale consists of 15 items, comprising two of the subscales of the ENRICH, namely the Idealistic Distortion subscale (consisting out of 5 items) and the Marital Satisfaction subscale (consisting out of 10 items) (Fowers & Olson, 1993). Each item of the Marital Satisfaction Scale represents one of the areas of the marital relationship measured by the full-length ENRICH Inventory. Thus each item represent the most important dimensions of marital satisfaction found in Fournier's et al. study (Fournier et al., 1983; Fowers & Olson, 1993). The Idealistic Distortion scale represents a modified version of the Edmonds, Marital Conventionalization Scale. Evidence shows that it correlates highly with other scales that measure marital conventionalization (Fowers & Olson, 1989). "The score on this scale is used to correct the Marital Satisfaction scale score on the basis of the degree to which the respondent portrays the marriage in an impossibly positive way" (Fowers & Olson, 1993, p. 180). The EMS Scale is measured on a 5 point Likert-scale, ranging from strongly disagree (1) to strongly agree (5). The eventual score "is derived by first scoring the Marital Satisfaction and Idealistic Distortion scales, then correcting the marital satisfaction score downward on the basis of the person's idealistic distortion score" (Fowers & Olson, 1993, p. 180). In the current study, the subscale Marital Satisfaction was used to measure marital satisfaction under the nurses.

3.6.7.2 Psychometric properties of ENRICH Marital Satisfaction Scale

The EMS Scale has displayed an internal reliability of .86 (Bonds-Raacke, Bearden, Carriere, Anderson & Nicks, 2001). The Marital Satisfaction scale's item-total correlations are strong, ranging from .52 to .82, with a mean of .65 for men, and .68 for women (Fowers & Olson, 1993). The EMS scale demonstrated concurrent validity with coefficients of .71 for men and .77 for women with single-item indicator measures (Bonds-Raacke et al., 2001). The construct validity for the EMS Scale was

demonstrated by correlations of .71, for the couple scores, and .66, for the individual scores, with the Family Satisfaction Scale (Bonds-Raacke et al. 2001). The construct validity of this EMS scale is also supported by correlations with measures of divorce proclivity, as well as family satisfaction, that indicate a moderate level of common variance, which suggests little redundancy among these two scales (Fowers & Olson, 1993).

3.6.8 Work-life Culture

This study used a Work-Family Culture Scale, measuring whether the hospital had a supportive or unsupportive work-life culture (Sahibzada, Hammer, Neal & Kuang, 2005). In the following overview the focus will be placed upon the nature, composition, administration and psychometric properties of this instrument.

3.6.8.1 Nature, composition and administration of the measurement

Work-life culture was measured using an 8-item Work-Family Culture Scale. This scale was developed by Sahibzada, Hammer, Neal and Kuang for their study to determine the effect work-family culture has on their study. The response options in this scale are on a 4-point Likert scale, ranging from 1=strongly disagree; 2=somewhat disagree; 3=somewhat agree; and 4=strongly agree. An example of an item is as follows: “At the place where you work, employees who ask for time off for family reasons or try to arrange different schedules or hours to meet their personal or family demands are less likely to get ahead” (Sahibzada et al., 2005).

3.6.8.2 Psychometric properties of Work-life Culture Scale

A supportive work-life culture will be associated with a high score on this scale, whereas an unsupportive work-life culture will be associated with a low score on this scale. Several of the items in this scale are reverse coded (items that are phrased in the semantically opposite direction). This 8-item Work-Family Culture Scale has an alpha of .81 (Sahibzada et al., 2005).

3.7 MISSING VALUES

It is important to address missing values in the data, because it is a problem that needs to be solved before the data is analysed. When determining the method to utilise for managing the missing values, it is important to consider the number of missing values and the nature of the data. Multivariate data usually contains missing values; the reason for this is normally non-responses or absenteeism from the sample (De Goede, 2007).

Therefore it is important to deal with missing values before computing the data. Calculating the composite indicator variables without dealing with the missing values, may lead to seemingly adequate, but in reality deficient indicator variables (Burger, 2011). There are various possible options to treat the problem of missing values, the options include:

- List-wise deletion
- Pair-wise deletion
- Imputation by matching
- Multiple imputation
- Full information maximum likelihood imputation.

After the nature and extent of the missing values in this data study was determined, a final decision was made on the approach to use to treat the missing-values. It was decided to use the K-nearest neighbour imputation method. This method searches for more than one (“k”) similar cases with known values for the attributes of the respondents themselves, or the other respondents’ answers (Kaiser, 2014). This method was used to fill in the missing values in response to the questionnaires.

3.8 DATA ANALYSIS

The selection of data analysis techniques depends on the type of research questions the study is aiming to answer. Different techniques were used to analyse the data, namely 1) psychometric analysis, 2) intercorrelation matrices, 3) successive multiple regression analyses and 4) partial least squares path modelling (PLS-SEM) analysis. The objective of these data analysis techniques was to evaluate the psychometric

properties of the outer model and to evaluate the path coefficients of the inner model. A short explanation of the techniques used in this study is provided.

3.8.1 Psychometric Analysis

Item analysis can help increase a researcher's understanding of the reliability and validity of a psychometric instrument. Various scales were utilised to measure specific constructs, defined in terms of specific operational definitions (Bezuidenhout, 2013). Poor items are described as: "items that fail to discriminate between different levels of the latent variable they were designed to reflect and items that do not, in conjunction with their subscale counterparts, reflect a common latent variable" (Burger, 2011, p. 102). The items that fail do not contribute to the internal consistency of the latent variable. If this happens then the poor items could be considered for deletion from the subscale. The decision to delete such items is based upon the evidence obtained from item statistics. Evidence that one obtains from item statistics could be based on one of the following indices: item-total correlations, the squared multiple correlation, the change in subscale reliability when the item is deleted, the change in subscale variance if the item is deleted, the inter-item correlation, the item mean and the item standard deviation (Bezuidenhout, 2013).

In the present study, item analysis was performed to analyse the item statistics, but no poor items were deleted as it would reduce the comparability of the research results to other studies utilising the same instruments, and it might deleteriously affect the construct validity of the scale. The psychometric analysis therefore only served the purpose of flagging poor items and determining whether the results of the various instruments are reliable enough to warrant firm conclusions based upon it.

Correlational analysis describes the strength and direction of the linear relationship between two variables (Stangor, 2011). Once the statistical significance of the relationships has been identified then Pearson product-moment correlation coefficient values can be used to determine the strength and direction of a relationship. Interpretation of the p-value is as follows: a small p-value (typically ≤ 0.05) is regarded as a strong evidence of correlation in the parameter; a large p-value (typically > 0.05) is regarded as no or weak evidence of correlation in the parameter; and p-values close to the cut-off value of 0.05 is regarded as a marginal possibility of some correlation in

the parameter. If the p-value is equal or less than 0.5, the Pearson product-moment correlation coefficient can be used to determine the strength and direction of a relationship. The Pearson product-moment correlation coefficient values can range from -1 to 1. A negative value refers to a negative relationship (as one variable changes the other variable changes in the opposite direction) between the variables, whereas a positive value refers to a positive relationship between the variables (as one variable changes the other variable changes in the same direction) (Field, 2005; Stangor, 2011). Thus in this study the relationship between the independent and dependent variables was measured using correlational analysis.

To test the moderating variables *multiple regression* can be used as a measuring technique. Regression analysis attempts to predict one variable (dependent variable) from another variable or a set of variables (independent variables). Regression is based on correlation, but explores in more depth the interrelationships between the set of variables, explaining the contribution of each independent variable in terms of predictive power over and above what is offered by all the other independent variables. Regression analysis has the advantage of enabling the researcher to estimate the effect of each variable, whilst controlling for the other variables (Pallant, 2007; Salkind, 2007).

In order to analyse the effect of a moderating variable the proportion of variance in the dependent variable that is declared by the independent variable the R^2 must be established. Then the interaction effect must be added to the equation to determine if there is a change in R^2 if the moderator effect is included. If there is a significant change in R^2 it signifies that the interaction effect makes a significant contribution to the amount of variance in the dependent variable that is explained by the regression model (Pallant, 2007; Salkind, 2007).

Multiple regression can have a moderated or mediation interaction effect. *Moderated regression analysis* is described as “empirically detecting how a variable ‘moderates’ or influences the nature of a relationship between two other variables” (Russel & Bobko, 1992, p. 336). Thus moderated regression analysis was used to analyse the moderation effect of the moderated variable that changes (weakening or strengthening) the relationship between the independent and dependant variable. Preacher and Hayes (2004) describe a mediation interaction as the effect of X_1 on Y

through X_2 . A statistically rigorous method, the *Sobel test*, can be used to assess the mediation hypotheses. The Sobel test offers a more direct test of an indirect effect. In a simple mediation effect, the Sobel test is a specialized t-test that provides a method to determine whether the reduction in the effect of the independent variable, after including the mediator in the model, is a significant reduction and thus whether the mediation effect is statistically significant. In the present study the multiple regression analyses was done by means of the best subsets approach. The moderating effects were tested by using different approaches, the R^2 approach and the moderation was tested by including the interaction (independent*moderator) in the PLS model and the mediating effects were also tested by conducting the Sobel test.

3.8.2 Structural Equation Modelling (SEM)

SEM is a statistical technique that tests complex structural models as whole entities, by evaluating the validity, reliability and bias of the latent variables comprising structural models, and its support to linear and casual models (Theron, 2014).

3.8.2.1 Partial Least Squares (PLS) SEM analysis

There are two types of approaches to SEM. The first approach is the covariance-based SEM, LISREL, which is known as the hard-based modelling. PLS is the second approach that was developed in the mid 1960's in many fields such as marketing, organisational studies, behavioural sciences, management information system and business strategy. PLS is known as the soft-based modelling approach to SEM with no assumptions about data distribution. The PLS approach focuses on the analysis of variance (Kwong-Kay Wong, 2013). This approach determines the relationship between the dependent and independent variables as linear composites (Glocker, 2012). Thus PLS has the ability to determine the direct and indirect path influences among latent variables that are included in a nomological network. The PLS approach is regarded as an explorative and predictive technique.

There are two submodels in the PLS approach to SEM, namely the inner and outer model. The outer model determines to what extent items measure what they are supposed to measure and their relationship with the latent variables. The inner model determines to what extent the latent variables were related to each another. There are

also exogenous and endogenous variables in SEM, the exogenous variables has paths pointing away and none leading to it, whereas endogenous variables have paths pointing to it and represent the effects of other variables (Kwong-Kay Wong, 2013). The outer model in PLS is similar to the measurement model, which relates measured indicators to latent variables, and the inner model in PLS is similar to the structural model, which relates latent variables to each other (Monecke & Leisch, 2012). The evaluation of the model will require us to calculate the parameters related to both the measurement model and the structural model.

Before we can estimate the PLS model, a series of analyses must take place. According to Charoensukmongkol (2014) we must first evaluate the reliability of the latent variables to evaluate the measurement model, by looking at the average variance distracted (AVE) and the R-squared. The composite reliability coefficients must exceed .70 to be regarded as satisfactory. After evaluating the reliability of the latent variables, then PLS will reveal the reliability and validity of the measurement model in terms of certain criteria.

The structural model estimates will only be evaluated when the calculated latent variable scores shows evidence of sufficient reliability and validity. According to Chin (1998) in evaluating the structural model there are certain criteria to consider. Firstly R^2 values of .67, .33 and .19 for the endogenous latent variables are described as substantial, moderate and weak. Lastly the estimates of the path relationships in the structural model should be evaluated in terms of the sign, magnitude, and significance (via bootstrapping, a resampling technique). The Bootstrap technique provides an: “estimate of the shape, spread, and bias of the sampling distribution of a specific statistics” (Roux, 2014, p. 164). After bootstrapping, the accuracy of the path estimates of the true effects is assessed. The PLS results for all the bootstrap samples provides a mean value and standard error for each path model coefficient, then a t-test can be performed to indicate the significance of the path model relationships (Chin, 1998).

The advantage of using PLS is that the sample can be small and that predictive accuracy is of supreme importance. Thus PLS is a good alternative soft modelling approach compared to the covariance-based SEM approach. There are, however, some limitations associated with PLS, for instance, high-value structural path coefficients are needed if the sample size is small; there may exist a problem of

multicollinearity, and lastly PLS can create large mean square errors (Kwong-Kay Wong, 2013). In spite of these weaknesses, PLS is still useful, especially in this study, where the number of participants is limited and the data distribution may be skewed, perhaps due to the unequal representation of male nurses in the sample group.

3.9 ETHICAL CONSIDERATIONS

In this study there were no serious potential risks or discomfort related to the survey utilised. Major concerns were the anonymity of the participants, as well as the nature of the company in which the study was conducted. It was decided that all information obtained during this study will be utilised in a confidential way and would not be linked to a specific individual. Participant's names and identities were not disclosed. The participants' anonymity was protected, as only the researcher, supervisor and statistical analyst had access to the results. If any participants had a concern regarding confidentiality, it was addressed, to ensure them of the confidentiality of the results. The results were published as group data, and not as participants' names. Furthermore, the hospital's name was treated as confidential.

The respondents in this study were asked to participate voluntarily. The questionnaire used in this study did not require the respondents to reveal their names or any other personal information, thus the questionnaire helped to maintain confidentiality. Written consent was obtained from each respondent. The respondent had the right to refuse participation or withdraw at any time during the study, and this decision was respected. The decision to accept or reject the invitation to participate in this study, was also treated as confidential information. Agreeing or disagreeing to participate did not benefit or disadvantage any individual. The nature of the research was disclosed on an information sheet to the participants. They were informed about:

- The purpose of the study,
- What participation in the research involves,
- The potential risks and discomforts of the study,
- The confidentiality of the study,
- Who the researcher is,
- Their rights as participants,
- Where they can obtain more information on their research rights.

The above ethical considerations was in place for this study to ensure the protection and anonymity of the participants. Contact details of an Employee Wellness Program, Careways (that are registered counsellors who helps their clients achieve an healthy and balance lifestyle) that the Hospital uses, were made available to the participants in the informed consent document, if they develop a concern that they have to attend to either work-life conflict and/or burnout after completing the survey.

3.10 SUMMARY

This chapter explored the hypotheses relevant to this study, as well as the research methodology used to test the hypotheses. A critical overview was given of the research design, sampling technique and procedure, the measuring instruments as well as the statistical analysis techniques were provided. Lastly ethical risks and the steps towards mitigation of those risks were considered.

CHAPTER 4

RESULTS

4.1 INTRODUCTION

In the following chapter, the statistical analyses of the results will be explored in depth, after obtaining the information through the various statistical techniques and methods discussed in Chapter 3. Item analysis was used to evaluate the reliability of the different instruments. These instruments were used to measure the different latent variables of the study, variables such as work-life conflict, role overload, organisational support, burnout, psychological capital, emotional labour, marital satisfaction and work-life culture. Different techniques were used to analyse the data, namely 1) psychometric analysis, 2) intercorrelation matrices, 3) successive multiple regression analyses and 4) partial least squares path modelling (PLS-SEM) analysis.

4.2 EVALUATING THE MEASUREMENT MODEL

In the following section the psychometric analysis of the item analysis will be discussed regarding the reliability of the scales. As well as the psychometric analysis of correlation analysis.

4.2.1 Item Analysis

Item analysis was performed on all of the items in the questionnaire. Table 4.1 contains a summary of all the subscales measuring a sub-dimension of the various constructs. This summary includes the mean, standard deviation, Cronbach's alpha and average inter-item correlation of all the items that measure the specific dimension. Table 4.2 provides a summary of the mean, standard deviation, Cronbach's alpha and average inter-item correlation of all the total scales.

The Cronbach's alpha is regarded as satisfactory when $\geq .70$ (Nunnally & Bernstein, 1999). The inter-tem correlation is also regarded as an indicator of internal consistency reliability. Inter-item correlation coefficients are considered excellent between the values of .5 and 1; and acceptable between the values of 0 and .5 (Tabachnick & Fidell, 2013).

Table 4.1***Means, Standard Deviations, and Internal Consistency Reliabilities of Subscales***

Scale	Sample size	Number of items	Mean	Standard deviation	Cronbach's alpha	Average inter-item correlation
WLI- NWHI	106	8	10.86	5.19	.90	.53
WLI-NHWI	106	4	2.81	3.09	.92	.74
JDR- role overload	106	7	19.89	4.35	.86	.48
JDR- organisational support	106	12	35.19	7.67	.91	.46
BUR-personal	106	6	14.14	4.81	.91	.65
BUR-work	106	7	14.07	5.86	.88	.53
BUR-patient	106	6	7.87	5.95	.91	.67
PC- self-efficacy	106	6	25.0	5.71	.84	.48
PC- hope	106	6	25.91	5.20	.81	.45
PC- resilience	106	6	25.83	4.46	.72	.35
PC- optimism	106	6	25.58	4.64	.69	.32
EL-frequency	106	3	11.11	2.43	.86	.68
EL- intensity	106	2	5.97	2.06	.86	.76
EL-variety	106	3	9.25	2.94	.90	.77
EL-deep acting	106	3	9.92	3.00	.89	.74
EL-surface acting	106	3	8.70	3.09	.83	.63

WLI= Work-life interference; NWHI= Negative work-home interference; NHWI= Negative home-work interference; JDR= Job demands/resources; BUR= Burnout; PC= Psychological capital; EL= Emotional labour

This table illustrates the item analysis of all the subscales. All of the Cronbach's alphas of the subscales were above .70, except optimism from the psychological capital scale that had an alpha value of .69, which could be considered as border-line.

Table 4.2***Means, Standard Deviations, and Internal Consistency Reliabilities of Scales***

Scale	Sample size	Number of items	Mean	Standard deviation	Cronbach's alpha	Average inter-item correlation
WLI	106	12	2.06	1.26	.72	.57
BURNOUT	106	19	5.68	2.38	.88	.75
PSYCAP	106	24	17.05	2.59	.78	.48
EL	106	14	15.98	3.49	.76	.41
MRS	106	10	36.30	9.08	.89	.45
WL CUL	106	8	16.76	5.61	.87	.48

EL= Emotional labour; PSYCAP= Psychological capital; WLI= Work-life interference; MRS= Marital satisfaction; WL CUL= Work-life culture

This table illustrates the item analysis of all the total scales. All of the Cronbach's alphas from the total scales were above .70. All the inter-item correlations pertaining to the different scales can be considered as excellent, with values above .50. A higher score for inter-item correlation means that these items are measuring the same construct to a certain degree.

4.2.1.1 Work-life conflict

Work-life conflict was measured with the negative scales of the Survey Work-Home Interaction Nijmegen (SWING) instrument. This instrument obtained a Cronbach's alpha coefficient of .72, which indicates a satisfactory internal consistency reliability. The scale consists of four subscales, but this study only focussed on the two negative subscales, namely negative work-home interference (NWHI) and negative home-work interference (NHWI). The Cronbach's alphas for both these scales were satisfactory as they were both above the cut-off coefficient value of .70. The Cronbach's alpha for the NWHI scale was .90; and for the NHWI scale .92. The average inter-item correlation for NWHI was .53, and for NHWI it was .74. The average inter-item correlation for the total (negative) work-life interference scale obtained a value of .57. It was decided before conducting the study that no poor items will be deleted and that the psychometric analysis would only serve the purpose of flagging poor items.

4.2.1.2 Burnout

The Copenhagen Burnout Inventory (CBI) was used to measure the construct burnout. The CBI instrument has three scales; namely personal burnout, work burnout and client burnout. The Cronbach's alpha's were highly satisfactory for all three subscales (personal burnout = .91; work burnout = .88 and client burnout = .91). The average inter-item correlation for the three subscales ranged from .53 to .67, which could be seen as an indication of the internal consistency within each of these three subscales.

The overall burnout scale had a Cronbach alpha of .88, indicating a high internal consistency reliability. With an average inter-item correlation of .75, the CBI can be considered as an effective instrument in measuring burnout.

4.2.1.3 Psychological capital

The Psychological Capital Questionnaire (PCQ) obtained a Cronbach's alpha of .78 overall, which indicates high internal consistency reliability. The PCQ consists of four subscales, namely self-efficacy, hope, optimism and resilience. The self-efficacy subscale obtained a Cronbach's alpha of .84, which is satisfactory. The next subscale, namely hope obtained a Cronbach's alpha of .81, which is also satisfactory. A Cronbach's alpha of .69 was obtained for the subscale optimism, even though it is slightly below .70, the subscale can be assumed to be reliable as well. The reason behind the Cronbach alpha of optimism can be due to the fact of the two items that are reversed scored in that subscale. The internal consistency of the last subscale, namely resilience is satisfactory with a Cronbach's alpha of .72. The average inter-item correlation for the subscales ranged from .32 to .48, which is seen as acceptable reliability values. The self-efficacy subscale scored an average inter-item correlation of .48, and hope scored an average inter-item correlation of .45. The next subscale, resilience scored a .35 average inter-item correlation, whereas optimism scored a .32 correlation. The overall psychological capital scale obtained an average inter-item correlation of .48, which is an indication of acceptable reliability.

4.2.1.4 Emotional labour

The Emotional Labour Scale (ELS) obtained a Cronbach's alpha coefficient of .76, which indicates a high level of internal consistency reliability. The scale consists of 5 sub-dimensions, namely frequency, intensity, variety, deep acting and surface acting. The Cronbach's alphas of the sub-dimensions were all satisfactory as all were above the cut-off value of .70 (Frequency = .88; Intensity = .86; Variety = .90; Deep acting = .89 and Surface acting = .83). The average inter-item correlations for the subscales ranged from .63 up to .77. The internal consistency was supported by the total scale's average inter-item correlation of .41.

4.2.1.5 Marital satisfaction

This study used the ENRICH (Enriching and Nurturing Relationship Issues, Communication and Happiness) Marital Satisfaction Scale (EMS) to measure marital or long-term relationship satisfaction. The marital satisfaction scale obtained a

Cronbach alpha of .89, which indicates high internal consistency reliability. The average inter-item correlation for the EMS was found to be .45, which also is an indication of acceptable reliability.

4.2.1.6 Work-life culture

The Work-life Culture Scale was used to measure the work-life culture of the hospital. The Work-life Culture Scale obtained a Cronbach alpha of .87, and an average inter-item correlation of .48, which indicates a high internal consistency reliability.

4.2.1.7 Decision regarding the reliability of the scales

The psychometric analysis of the item analysis served the purpose of flagging poor subscales and determining whether the instruments are reliable enough to be used in this study.

The overall results of the item analysis provided satisfactory evidence to support the inclusion of all the instruments. The Cronbach's alphas of all of the instruments items were satisfactory, above .70, except the optimism subscale from the Psychological Capital Questionnaire. It was decided that no poor items will be deleted from existing scales, as it may improve the Cronbach's alpha in this study, but it would reduce the comparability of the research results to other studies and increase the possibility of construct underrepresentation. Therefore all the items of the measurements were retained. The average inter-item correlations of the scales ranged from .41 to .75.

In conclusion, the results of the item analysis were regarded as satisfactory for the further utilisation of the subscales and scales in the study.

4.2.2 Correlation Analysis

Stangor (2011) describes correlational analysis as analysing the strength and direction of the linear relationship between two variables. Once the statistical significance of the relationships has been identified, then the Pearson product-moment correlation coefficient values can be used to determine the strength and direction of a relationship. Interpretation of the p-value is as follows: a small p-value (typically $\leq .05$) is regarded as strong evidence of a correlation in the parameter; a large p-value (typically $> .05$) is

regarded as no or weak evidence of a correlation in the parameter; and p-values close to the cut-off value of .05 are regarded as a marginal possibility of some correlation in the parameter.

If the p-value is equal or less than .05, the Pearson product-moment correlation coefficient can be used to determine the strength and direction of a relationship. The Pearson product-moment correlation coefficient values can range from -1 to 1. A negative value refers to a negative relationship between the variables, whereas a positive value refers to a positive relationship between the variables (Field, 2005). See attached Appendix 1, which reports the correlation analyses between the variables in the present study, indicating the Pearson p-values.

4.3 PARTIAL LEAST SQUARES ANALYSIS (PLS-SEM)

According to Charoensukmongkol (2014) a two stage analytic procedure is used when using the PLS analysis. Firstly, the measurement model was tested (reliability and validity measures) and then the structural model was tested (hypothesised relationships). The objective of the PLS measurement model analysis is to determine to what extent items measure what they are supposed to measure and their relationship with the latent variables. The measurement model is also known as the 'outer model'. The objective of the PLS structural model analysis was to determine to what extent the latent variables were related to each another. The relationship and influence of the exogenous variables on the endogenous variables and the endogenous variables on one another were determined. The structural model is also known as the 'inner model', since it determines factors inside the structural model (Kwong-Kay Wong, 2013; Monecke & Leisch, 2012).

4.3.1 Evaluation of the Measurement Model

The purpose of this analysis is to evaluate the reliability of the latent variables to evaluate the measurement model, by looking at the composite reliability and the average variance distracted (AVE). For the composite reliability the coefficients must be equal to or exceed .70 to be regarded as satisfactory. The composite reliability of all the latent variables of this study was found to be higher than .70, thus it can be concluded as satisfactory (See Table 4.3 below). The variable CGR (care-giving

responsibilities) did not show any composite reliability, because it is a formative construct (the items influences the construct, namely CGR) and is not a reflective construct such as the other latent variables. As illustrated in Table 4.4, the formative item, child dependent of CGR is significant with a loading of .02, and a weight of .085. The other formative item, adult dependent of CGR is not significant with a loading of .426, and a weight of .916. This can be a problematic item, but it was decided to keep the formative item in the study.

The AVE is a stricter measure of reliability and measures how much variance in the items (indicator variables) measures the construct itself, a score above .50 is seen as satisfactory. In this study most of the latent variables were equal or above .50, indicating that these constructs explain more than 50% of the variance in the items. Only EL (emotional labour) had an AVE score of below .50, however, it was close enough to the critical value, with a score of .45. The results of these statistics are displayed in Table 4.3 below.

Table 4.3

Reliability Statistics of the PLS Model

Scale	Composite Reliability	Average Variance Extracted (AVE)
BURNOUT	.93	.82
EL	.80	.45
MAR SAT	.91	.50
ORG SUP	.92	.50
PSYCAP	.85	.60
RO	.89	.55
WL CUL	.90	.53
WLC	.88	.78

EL= Emotional labour; MAR SAT= Marital satisfaction; ORG SUP= Organisational support; PSYCAP= Psychological capital; RO= Role overload; WL CUL= Work-life culture; WLC= Work-life conflict

Table 4.4***Reliability of the Formative Construct- Care Giving Responsibilities***

Item	Loading/weight	P-values
Child dependent	Loading	.02
Child dependent	Weight	.085
Adult dependent	Loading	.426
Adult dependent	Weight	.916

The discriminant validity was tested by means of the Heterotrait-Monotrait ratios and, it was evident that all the scales passed the test. It can therefore be concluded that all the constructs are unique and do not correlate highly with the other constructs in the model. See Appendix 2 for the Heterotrait-Monotrait ratios. If there is no value of 1 or higher in the column 97.5%, then the two constructs could be regarded as distinct from one another (M. Kidd, personal communication, 9 November 2016).

4.3.1.1 Outer loadings

PLS bootstrap analysis was also performed to evaluate whether the outer loadings were significant or not. High outer loadings mean that the indicators of the construct have a great deal in common. This refers to indicator reliability. The outer loadings were evaluated by looking at whether zero falls within the 95% confidence interval. If the zero falls within the interval, the outer loadings are not significant, if the zero falls outside this interval, the outer loadings are significant.

Table 4.5

Outer Loadings

Latent Variable	Path	Original Sample	95% confidence interval (lower)	95% confidence interval (upper)	Significant
BURNOUT	Patient burnout -> Burnout	.845	.782	.893	Significant
	Personal burnout -> Burnout	.908	.876	.936	Significant
	Work burnout -> burnout	.96	.942	.973	Significant
EL	Deep acting -> EL	.548	-.072	.763	Insignificant
	Frequency -> EL	.509	.083	.706	Significant
	Intensity -> EL	.658	.035	.824	Significant
	Surface acting -> EL	.84	.724	.977	Significant
MAR SAT	Variety -> EL	.74	.124	.869	Significant
	MRS1-> MAR SAT	.543	.29	.731	Significant
	MRS10 -> MAR SAT	.822	.734	.889	Significant
	MRS2 -> MAR SAT	.84	.736	.9	Significant
	MRS3 -> MAR SAT	.673	.448	.794	Significant
	MRS4 -> MAR SAT	.848	.741	.915	Significant
	MRS5 -> MAR SAT	.623	.378	.764	Significant
	MRS6 -> MAR SAT	.745	.57	.868	Significant
	MRS7 -> MAR SAT	.786	.634	.884	Significant
ORG SUP	MRS8 -> MAR SAT	.503	.26	.685	Significant
	MRS9 -> MAR SAT	.573	.342	.739	Significant
	JDR10 -> ORG SUP	.795	.671	.871	Significant
	JDR11 -> ORG SUP	.724	.588	.816	Significant
	JDR12 -> ORG SUP	.689	.538	.791	Significant
	JDR13 -> ORG SUP	.814	.734	.87	Significant
	JDR14 -> ORG SUP	.744	.646	.821	Significant
	JDR15 -> ORG SUP	.505	.244	.681	Significant

Table 4.5 (Continued)

Latent Variable	Path	Original Sample	95% confidence interval (lower)	95% confidence interval (upper)	Significant
PSYCAP	JDR16 -> ORG SUP	.722	.581	.825	Significant
	JDR17 -> ORG SUP	.818	.741	.873	Significant
	JDR18 -> ORG SUP	.606	.383	.759	Significant
	JDR19 -> ORG SUP	.657	.466	.778	Significant
	JDR8-> ORG SUP	.698	.554	.789	Significant
	JDR9 -> ORG SUP	.677	.487	.793	Significant
	Hope -> PSYCAP	.872	.802	.914	Significant
	Optimism -> PSYCAP	.862	.811	.901	Significant
	Resilience -> PSYCAP	.688	.496	.803	Significant
	Self-efficacy -> PSYCAP	.661	.46	.786	Significant
RO	JDR1 -> RO	.702	.558	.804	Significant
	JDR2 -> RO	.762	.643	.833	Significant
	JDR3 -> RO	.774	.655	.854	Significant
	JDR4 -> RO	.636	.444	.768	Significant
	JDR5 -> RO	.789	.718	.853	Significant
	JDR6 -> RO	.832	.761	.888	Significant
	JDR7 -> RO	.664	.518	.771	Significant
WL CUL	WLC1 -> WL CUL	.64	.332	.778	Significant
	WLC2-> WL CUL	.732	.439	.851	Significant
	WLC3 -> WL CUL	.719	.502	.864	Significant
	WLC4 -> WL CUL	.699	.332	.861	Significant
	WLC5 -> WL CUL	.804	.543	.901	Significant
	WLC6 -> WL CUL	.799	.564	.884	Significant
	WLC7 -> WL CUL	.795	.565	.888	Significant
	WLC8 -> WL CUL	.627	.314	.796	Significant
WLC	NHWI-> WLC	.881	.811	.924	Significant
	NWHI-> WLC	.888	.822	.925	Significant

EL= Emotional labour; MAR SAT= Marital satisfaction; ORG SUP= Organisational support; JDR= Job demands/ resources; PSYCAP= Psychological capital; RO= Role overload; WL CUL= Work-life culture; WLC= Work-life conflict; NHWI= Negative home-work interference; NWHI= Negative work-home interference.

As illustrated above in Table 4.5 the reliability is confirmed through the strength of the relationships between the paths of the latent variables and the relevant subscales in the survey that were all significant (indicating that the zero did not fall inside the 95% confidence interval). Only one path EL->EL Deep acting was found to be insignificant, with a p-value of .01 and the zero falling within the interval. Thus this subscale (EL Deep acting) has a weak relationship with the relevant latent variable (EL). Moreover, even though the EL variable composite reliability was satisfactory, the AVE was below .50, which could question the reliability to some extent.

4.3.2 Evaluation of the Structural Model

To determine the nature of the relationships between the latent variables the structural model was analysed. The structural model is also known as the inner model, and specifies the relationships between the independent and dependent variables, therefore the relationships between the exogenous variables and the endogenous variables, and the different endogenous variables can be tested. The evaluation of the structural model includes the evaluation of the degree of multicollinearity, the R-squared values, the path coefficients and the moderating/mediating effects.

4.3.2.1 The Degree of Multicollinearity

The study tested the role played by multicollinearity in the regression analyses by using a variance inflation factor (VIF). Variance inflation factors measure how much the variance of the estimated regression coefficients are inflated compared to when the predictor variables are not linearly related. This information is used to describe how much multicollinearity (overlap between predictors) exists in a regression analysis. The literature indicated that the maximum acceptable level of VIF is a value of 10 (O'Brien, 2007), however other studies indicate that the maximum acceptable level of VIF is a value of 5 (Pennstate, 2015). In the current study the acceptable VIF value was defined as 5. See attached Appendix 3, which illustrates that all VIF scores in the present study were below 5, indicating no multicollinearity problems. There were therefore no overlaps between the measures for the different constructs.

4.3.2.2 Evaluation of the R²

The R square value determines how much variance in the endogenous variables is explained by the exogenous variables. Table 4.6 illustrates the R² values of the endogenous variables.

Table 4.6

R Squared Values for Endogenous Values

Endogenous variable	R squared value
Burnout	.636
Work-life Conflict	.669

As illustrated in Table 4.6, the endogenous variable, *burnout* obtained a R² value of .636, which indicates that the total model accounts for 63.6% of the variance observed in burnout amongst nurses. The other endogenous variable, *work-life conflict* obtained a R² value of .669, which indicates that the total model accounts for 66.9% of the variance observed in work-life conflict amongst nurses.

4.3.2.3 Evaluation and interpretation of the main effects

It is important to note that the purpose of PLS path modelling is not to test a theory, but to facilitate prediction (Henseler, Ringle & Sinkovics, 2009). After the reliability of the indicator measures of each latent variable was established, path coefficients were examined to determine the strength and significance of the hypothesised relationships. In order to determine the significance of the paths between latent variables, the bootstrapping method was used (Davison, Hinkley, & Young, 2003).

The values reported in Table 4.7 indicate whether the path coefficients were significant or not. In order to determine the strength and significance of the hypothesised paths as proposed in the structural model (Figure 3.1), path coefficients were investigated by determining whether zero fell within the 95% confidence interval. If zero does fall within this confidence interval, one can conclude that the path coefficient is not significant. In the case where zero does not fall within the confidence interval, the coefficient and thus the path can be seen as significant. The significance of the path

coefficients was investigated and information on whether the hypothesised paths were significant was provided for each path.

Table 4.7

Path Coefficients between Latent Variables of Inner Model

Path	Path coefficient	95% confidence interval (lower)	95% confidence interval (upper)	Description
H1: WLC-> Burnout	.245	.063	.431	Significant
H2: RO ->WLC	.443	.252	.582	Significant
H3: RO -> BURNOUT	.42	.242	.557	Significant
H4: EL -> WLC	.13	-.029	.271	Not Significant
H5: EL -> BURNOUT	.108	-.023	.267	Not Significant
H9: CGR -> WLC	.207	-.178	.332	Not Significant
H10: CGR -> BURNOUT	-.021	-.162	.113	Not Significant
H12: MAR SAT -> WLC	-.182	-.327	-.079	Significant

WLC= Work-life conflict; RO= Role overload; EL= Emotional labour; CGR= Care giving responsibilities; MAR SAT= Marital satisfaction

Path coefficients were therefore utilised to determine the strength, significance and direction of the hypothesised relationships as proposed in the structural model. The analysis was done using a 95% confidence interval, similar to what was explained earlier.

Hypothesis 1: In the proposed structural model it is hypothesised that WLC has a significant positive relationship with burnout experienced by nurses.

The hypothesised positive relationship between WLC and Burnout was found to **be significant**. The PLS path coefficient was equal to .245, with zero not falling in the 95% confidence interval. The exact information on the confidence of the lower and upper interval is provided in Table 4.7. This confirms previous research endeavours that studied this relationship (Wang et al., 2012). Wang's study found that high levels of work-life conflict correlated with high levels of burnout among Chinese nurses, and

that both work to life interference and life to work interference positively related to the two burnout components (emotional exhaustion and cynicism). It is evident from the current study results that there is a positive relationship between WLC and burnout. This means that if nurses have high levels of negative work-to-home interference and negative home-to-work interference, they will experience burnout (personal, work and patient burnout). This finding contributes to our understanding of the relationship between WLC and burnout, and supports other research findings in the healthcare system.

Hypothesis 2: In the proposed structural model it is hypothesised that role overload has a significant positive relationship with WLC among nurses.

The hypothesised positive relationship between RO and WLC was found to **be significant**. The PLS path coefficient was equal to .443, with zero not falling in the 95% confidence interval. The exact information on the confidence of the lower and upper interval is provided in Table 4.7. This finding supports the findings of Duxbury et al. (2008) that job demands will interfere with family life, and vice versa, leading to higher levels of role overload. The current findings provide support to the findings of Duxbury, that role overload has a positive relationship with WLC. Thus, nurses who have high levels of role overload, are more prone to experience WLC, as compared to nurses who have low levels of role overload.

Hypothesis 3: In the proposed structural model it is hypothesised that role overload has a significant positive relationship with burnout among nurses.

The hypothesised positive relationship between RO and Burnout was found to **be significant**. The PLS path coefficient was equal to .42, with zero not falling in the 95% confidence interval. The exact information on the confidence of the lower and upper interval is provided in Table 4.7. This supports the findings of Hanif and Raza Naqvi (2014) that the long working hours that nurses experience, affect the quality of their interaction with their family, and this may lead to nurses experiencing more burnout. The inference can therefore be made that nurses who have experienced role overload,

will also experience burnout, as compared to nurses who did not experience role overload.

Hypothesis 4: In the proposed structural model it is hypothesised that emotional labour has a significant positive relationship with the level of WLC experienced by nurses.

The hypothesised positive relationship between EL and WLC was found **not to be significant**. The PLS path coefficient was equal to .13, with zero falling in the 95% confidence interval. The exact information on the confidence of the lower and upper interval is provided in Table 4.7.

This non-significant finding might be due to the fact of the low AVE score of the emotional labour scale. This should be taken into consideration, as it could fail to provide an accurate indication of the emotional labour experienced by the nurses. The hypothesis is not significant, so in other words, emotional labour does not have a positive relationship with WLC. Therefore, if nurses experience emotional labour they will not necessarily have higher levels of WLC, as hypothesised.

Hypothesis 5: In the proposed structural model it is hypothesised that emotional labour has a significant positive relationship with the level of burnout experienced by nurses.

The hypothesised positive relationship between EL and Burnout was found **not to be significant**. The PLS path coefficient was equal to .108, with zero falling in the 95% confidence interval. The exact information on the confidence of the lower and upper interval is provided in Table 4.7. This result is in contrast to previous research studies that studied this relationship (Chou et al., 2012). Consequently, the emotional labour the nurses may experience will not necessary lead to an increase level of burnout experienced by the nurses.

This non-significant finding can also be an indication of Pugh et al. (2011) and Bozionelos and Kiamou (2008) findings that surface acting is more likely to lead to burnout, and deep acting is less likely to lead to burnout. In the case of the bivariate correlations both patient ($r = .49, p < .01$) and work burnout ($r = .51, p < .01$) were

significantly related to surface acting. Thus the nurses may make use of surface acting by changing their outward expression, but they do not feel the emotion they are displaying.

Hypothesis 9: In the proposed structural model it is hypothesised that care-giving responsibilities has a significant positive relationship with the WLC among nurses.

The hypothesised positive relationship between CGR and WLC was found **not to be significant**. The PLS path coefficient was equal to .207, with zero falling in the 95% confidence interval. The exact information on the confidence of the lower and upper interval is provided in Table 4.7. This differs from previous research of Lu et al. (2008) that stated that parents who have children, experience more work-life conflict and Ohja (2011) who found that having more children is associated with higher levels of work-life conflict. This non-significant finding implies that nurses who have care-giving responsibility duties will not necessarily experience work-life conflict. Thus work-life conflict is not dependent on care-giving responsibilities, and will not be influenced by care-giving responsibilities.

Hypothesis 10: In the proposed structural model it is hypothesised that care-giving responsibilities has a significant positive relationship with burnout among nurses.

The hypothesised positive relationship between CGR and Burnout was found **not to be significant**. The PLS path coefficient was equal to -.021, with zero falling in the 95% confidence interval. The exact information on the confidence of the lower and upper interval is provided in Table 4.7. Consequently, the finding is in contrast with some of the existing research on the relationship between care-giving responsibilities and burnout (Ten Brummelhuis et al., 2008). The assumption was made in the current study that care-giving responsibilities will be related positively to burnout, but the results did not support it. In other words, the care-giving responsibilities of nurses do not have a positive effect on the level of burnout they may experience.

Hypothesis 12: In the proposed structural model it is hypothesised that marital satisfaction has a significant negative relationship with the WLC among nurses.

The hypothesised positive relationship between MAR SAT and WLC was found to **be significant**. The PLS path coefficient was equal to $-.182$, with zero not falling in the 95% confidence interval. The exact information on the confidence of the lower and upper interval is provided in Table 4.7. This verifies the findings of Matias and Fontaine (2012) that marital satisfaction leads to more work-life balance, and less work-life conflict. The inference can therefore be made that nurses with high levels of marital satisfaction would be less likely to experience work-life conflict, compared to nurses who have low levels of marital satisfaction.

4.3.2.4 Evaluation and interpretation of the proposed moderating hypotheses

There were two approaches followed when we tested for moderation effects. Firstly, three variables were used (the independent, moderator and dependent variables) to test whether the R^2 will increase significantly when the interaction between the independent and moderator variables (independent*moderator) is included. In Table 4.8 the interaction effect, the R^2 change value and p-values are provided. For these purposes $p < .05$ will be regarded as indicating that the value is statistically significant.

Secondly, the moderation effect is tested by including the interaction (independent variable*moderator) in the PLS model to see whether the path coefficient of the interaction will be significant. In Table 4.9 the path coefficients of the moderation effects are provided for the structural model.

Table 4.8***Interaction Effect, R² change and P-values for the Moderating Effects***

Path	Interaction coefficient	R ²	P-value
H6: SUP* EL-WLC	-.198	-.006	.37
H6: SUP* RO-WLC	-.094	-.005	.40
H7: SUP* WLC-BURN	-.299	-.003	.39
H8: WL Cul* CGR-WLC	.306	-.031	.06
H11: MRS* CGR-WLC	-.433	-.000	.83
H13: PSYCAP* RO-WLC	-.416	-.028	.01
H13: PSYCAP* EL-WLC	-.516	-3.745	.98
H13: PSYCAP* CGR-WLC	-.566	-.009	.26
H14: PSYCAP* WLC-BURN	-.131	-.012	.16

WLC= Work-life conflict; RO= Role overload; EL= Emotional labour; CGR= Care giving responsibilities; MRS= Marital satisfaction; PSYCAP= Psychological capital; SUP= Organisational support; WL Cul= Work-life culture; BURN= Burnout

Table 4.9***Moderating Path Coefficients***

Path	Path coefficient	95% confidence interval (lower)	95% confidence interval (upper)	Description
H6: SUP* EL-WLC	.068	.08	-0.09	Not Significant
H6: SUP* RO-WLC	.045	-.191	.206	Not Significant
H7: SUP* WLC-BURN	.064	-.112	.178	Not Significant
H8: WL Cul* CGR-WLC	-.154	-.259	.162	Not Significant
H11: MRS* CGR-WLC	-.046	-.219	.134	Not Significant
H13: PSYCAP* RO-WLC	-.221	-.378	-.053	Significant
H13: PSYCAP* EL-WLC	.093	-.078	.193	Not Significant
H13: PSYCAP* CGR-WLC	-.063	-.3	.137	Not Significant
H14: PSYCAP* WLC-BURN	.113	-.013	.286	Not Significant

WLC= Work-life conflict; RO= Role overload; EL= Emotional labour; CGR= Care giving responsibilities; MRS= Marital satisfaction; PSYCAP= Psychological capital; SUP= Organisational support; WL Cul= Work-life culture; BURN= Burnout

Path coefficients were utilised to determine the strengths, significance and direction of the hypothesised moderating effects in the structural model. The significance of a hypothesised path is determined by whether zero is present between the lower and upper bootstrapping values. The analysis was done using a 95% confidence interval.

Hypothesis 6: In the proposed structural model it is hypothesised that organisational support (from co-workers and supervisors) moderates the impact of the job demands, role overload and emotional labour, on WLC among nurses.

The p-value of organisational support as a moderator of the relationship between emotional labour and work-life conflict was found to be $p = .37$, which means that organisational support does not have a statistically significant moderating effect on the relationship between emotional labour and work-life conflict. When this moderating effect of organisational support on the relationship between emotional labour and work-life conflict was tested further in terms of PLS bootstrapping, the same finding was found. The hypothesised moderating effect of organisational support on the relationship between emotional labour and work-life conflict was again found to be **not statistically significant**. The PLS path coefficient was equal to .068, with zero falling in the 95% confidence interval. The exact information on the confidence of the lower and upper intervals is provided in Table 4.9.

The p-value of organisational support as a moderator of the relationship between role overload and work-life conflict was found to be $p = .40$, which means that organisational support does not have a statistically significant moderating effect on the relationship between role overload and work-life conflict. When this moderating effect of organisational support on the relationship between role overload and work-life conflict was tested further in terms of PLS bootstrapping, the same finding was found. The hypothesised moderating effect of organisational support on the relationship between role overload and work-life conflict again was found to be **not statistically significant**. The PLS path coefficient was equal to .045, with zero falling in the 95% confidence interval. The exact information on the confidence of the lower and upper intervals is provided in Table 4.9.

These two hypotheses are found to be in contrast to previous research findings of Ohja (2011) that found that social support moderates the relationship between job demands (role overload and emotional labour) and work-life conflict. The inference can thus be made that organisational support does not moderate the relationship between job demands (role overload and emotional labour) and work-life conflict, as proposed. In other words, even if nurses have the job resource of organisational support available in the hospital, it will not affect the nature of the interaction between their job demands (role overload and emotional labour) and the work-life conflict they may experience with their work.

Hypothesis 7: In the proposed structural model it is hypothesised that organisational support (from co-workers and supervisors) moderates the impact of WLC on burnout among nurses.

The p-value of organisational support as a moderator of the relationship between work-life conflict and burnout was found to be $p = .39$, which means that organisational support does not have a statistically significant moderating effect on the relationship between work-life conflict and burnout. When this moderating effect of organisational support on the relationship between work-life conflict and burnout was tested further in terms of PLS bootstrapping, the same finding was found. The hypothesised moderating effect of organisational support on the relationship between work-life conflict and burnout again was found to be **not statistically significant**. The PLS path coefficient was equal to .064, with zero falling in the 95% confidence interval. The exact information on the confidence of the lower and upper intervals is provided in Table 4.9.

This finding is in contrast with some of the existing research on the mediating relationship of support and the impact between work-life conflict and burnout (De Sousa, 2013; Ohja, 2011; Ten Brummelhuis et al., 2012). The inference can be made that organisational support does not moderate the relationship between work-life conflict and burnout, as proposed. In other words, even if nurses have the job resource, organisational support, available in the hospital, it will not affect their interaction between the work-life conflict they may experience and their burnout levels.

Hypothesis 8: In the proposed structural model it is hypothesised that a supportive work-life culture moderates the impact of care-giving responsibilities on the WLC of nurses.

The p-value of supportive work-life culture as a moderator of the relationship between care-giving responsibilities and work-life conflict was found to be $p = .06$, which means that supportive work-life culture does not have a statistically significant moderating effect on the relationship between care-giving responsibilities and work-life conflict. When the moderating effect of supportive work-life culture on the relationship between care-giving responsibilities and work-life conflict was tested further in terms of PLS bootstrapping, the same finding was found. The hypothesised moderating effect of supportive work-life culture on the relationship between care-giving responsibilities and work-life conflict was again found to be **not statistically significant**. The PLS path coefficient was equal to $-.154$, with zero falling in the 95% confidence interval. The exact information on the confidence of the lower and upper intervals is provided in Table 4.9. Thus, a supportive work-life culture does not influence the relationship between care-giving responsibilities and work-life conflict of nurses. This finding is in contrast to the previous research findings of Warren and Johnson (1995) and Shree (2012) who found that employed parents who have a supportive work environment have lower levels of work-life conflict. This finding suggests that even if the hospital has a supportive work-life culture, it will not moderate the relationship between their care-giving responsibility (a family demand) and their work-life conflict. This finding echoes the previous finding that organisational support does not have an effect on the job and/or family demands the nurses may experience.

Hypothesis 11: In the proposed structural model it is hypothesised that marital satisfaction moderates the impact of care-giving responsibilities on WLC among nurses.

The p-value of marital satisfaction as a moderator of the relationship between care-giving responsibilities and work-life conflict was found to be $p = .83$, which means that marital satisfaction does not have a statistically significant moderating effect on the relationship between care-giving responsibilities and work-life conflict. When the moderating effect of marital satisfaction on the relationship between care-giving responsibilities and work-life conflict was tested further in terms of PLS bootstrapping,

the same finding was found. The hypothesised moderating effect of marital satisfaction on the relationship between care-giving responsibilities and work-life conflict was again found to be **not statistically significant**. The PLS path coefficient was equal to $-.046$, with zero falling in the 95% confidence interval. The exact information on the confidence of the lower and upper intervals is provided in Table 4.9. This differs from the findings of Shree (2012). The finding indicates that the family resource of marital satisfaction does not moderate the impact of care-giving responsibilities on the work-life conflict that the nurses may experience.

Hypothesis 13: In the proposed structural model it is hypothesised that PsyCap moderates the impact of job and family demands (role overload, emotional labour, care-giving responsibilities) on the WLC of nurses.

The p-value of PsyCap as a moderator of the relationship between role overload and work-life conflict was found to be $p = .01$, which means that PsyCap does have a statistically significant moderating effect on the relationship between role overload and work-life conflict. When this moderating effect of PsyCap on the relationship between role overload and work-life conflict was tested further in terms of PLS bootstrapping, the same finding was found. The hypothesised moderating effect of PsyCap on the relationship between role overload and work-life conflict was again found to be **statistically significant**. The PLS path coefficient was equal to $-.221$, with zero not falling in the 95% confidence interval. The exact information on the confidence of the lower and upper intervals is provided in Table 4.9. This finding supports the findings of Theo et al. (2014) that PsyCap helps nurses in overcoming the challenges of their job and family demands, which could assist one in handling WLC before it occurs and after it has occurred.

The p-value of PsyCap as a moderator of the relationship between emotional labour and work-life conflict was found to be $p = .98$, which means that PsyCap does not have a statistically significant moderating effect on the relationship between emotional labour and work-life conflict. When this moderating effect of PsyCap on the relationship between emotional labour and work-life conflict was tested further in terms of PLS bootstrapping, the same finding was found. The hypothesised moderating effect of PsyCap on the relationship between emotional labour and work-life conflict

was again found to be **not statistically significant**. The PLS path coefficient was equal to .093, with zero falling in the 95% confidence interval. The exact information on the confidence of the lower and upper intervals is provided in Table 4.9.

The p-value of PsyCap as a moderator of the relationship between care-giving responsibilities and work-life conflict was found to be $p = .26$, which means that PsyCap does not have a statistically significant moderating effect on the relationship between care-giving responsibilities and work-life conflict. When this moderating effect of PsyCap on the relationship between care-giving responsibilities and work-life conflict was tested further in terms of PLS bootstrapping, the same finding was found. The hypothesised moderating effect of PsyCap on the relationship between care-giving responsibilities and work-life conflict was again found to be **not statistically significant**. The PLS path coefficient was equal to $-.063$, with zero falling in the 95% confidence interval. The exact information on the confidence of the lower and upper intervals is provided in Table 4.9.

These two sets of findings are also in contrast to previous research findings by Yardley (2012), which stated that PsyCap will act like a buffer against job and/or family demands and work-life conflict. Of all the moderating hypotheses regarding PsyCap as a moderator between job/family demands and work-life conflict, only one moderating effect was significant. Namely that when nurses display PsyCap as a personal resource, it will moderate the relationship between the role overload they are experiencing and their work-life conflict levels.

Hypothesis 14: In the proposed structural model it is hypothesised that PsyCap moderates the impact of WLC on burnout among nurses.

The p-value of PsyCap as a moderator of the relationship between work-life conflict and burnout was found to be $p = .16$, which means that PsyCap does not have a statistically significant moderating effect on the relationship between work-life conflict and burnout. When this moderating effect of PsyCap on the relationship between work-life conflict and burnout was tested further in terms of PLS bootstrapping, the same finding was found. The hypothesised moderating effect of PsyCap on the relationship between work-life conflict and burnout was again found to be **not statistically significant**. The PLS path coefficient was equal to $.113$, with zero falling

in the 95% confidence interval. The exact information on the confidence of the lower and upper intervals is provided in Table 4.9.

This finding contradicts previous research findings indicating that PsyCap is a moderator between work-life conflict and burnout (Liu et al., 2012; Wang et al., 2012; Yardley, 2012). Thus, this finding provides evidence that PsyCap does not offset the relationship between WLC and Burnout among the nurses (Figure 4.1).

Of all of the moderating hypotheses, only hypothesis 13 was supported. The other findings contradict the findings of previous researchers, which indicated that certain job, family and personal resources do not buffer the impact of job demands and family demands. These non-significant paths might be the result of many reasons. Firstly the sample size could potentially have influenced the results. Secondly it could be that the scales chosen for utilisation might not represent adequate operationalisations of the latent variables, like Emotional Labour. Lastly it could have been that not enough research has been done on family demands and family resources. Therefore more research must be done on the specific job, family and personal resources and their moderating effects on the relationships between job and family demands in the case of nurses and their work-life conflict and/or burnout.

4.3.2.5 Evaluation and interpretation of the proposed mediating hypotheses

We utilised two different approaches when we tested for mediation. Firstly, three variables are used (independent, moderator and dependent variable) to test mediation with SEM. There are three possible results when testing for mediation through SEM. Firstly, if one of the two indirect paths is not significant, but the direct path is significant, then there is *no mediation*. Secondly, *full mediation* is when the direct path is not significant, but the two indirect paths are significant. Lastly when all three paths are significant, then there is a *partial mediation* (M. Kidd, personal communication, 9 November 2016). The SEM results of the mediation effects are illustrated in Table 4.10.

The second approach used to test mediation, is the Sobel test. The Sobel test offers a more direct test of an indirect effect. In the case of a simple mediation effect, the Sobel test is a specialized t-test that provides a method to determine whether the

reduction in the effect of the independent variable, after including the mediator in the model, is a significant reduction and thus whether the mediation effect is statistically significant (Preacher & Hayes, 2004). The Sobel test results for this study are reported in Table 4.11. It was decided that, if the results of the two approaches were to differ, the results of the Sobel test will be used as the best approach for analysing the mediating effects (M. Kidd, personal communication, 9 November 2016).

Table 4.10

The Interaction Effects of the Mediating Relationship of SEM

Mediating relationship	Paths	Path coefficients	Description
RO*WLC*Burnout	RO -> WLC	.443	Significant
	RO -> Burnout	.420	Significant
	WLC-> Burnout	.245	Significant
EL*WLC*Burnout	EL -> WLC	.130	Not Significant
	EL -> Burnout	.108	Not Significant
	WLC -> Burnout	.245	Significant
CGR*WLC*Burnout	CGR -> WLC	.207	Not Significant
	CGR -> Burnout	-.021	Not Significant
	WLC -> Burnout	.245	Significant

RO= Role overload; WLC = Work-life conflict; EL = Emotional labour; CGR = Care-giving responsibilities

Table 4.11

The Interaction Effects of the Mediating Relationship of the Sobel Test

Mediation relationship	P-value	Description
RO*WLC*Burnout	.00	Significant
EL*WLC*Burnout	.00	Significant
CGR*WLC*Burnout	.20	Not Significant

RO= Role overload; WLC = Work-life conflict; EL = Emotional labour; CGR = Care-giving responsibilities

Path coefficients were utilised to determine the strengths, significance and direction of the hypothesised mediating effects. The significance of a hypothesised path is determined by the analysis of SEM and the Sobel test.

Hypothesis 15: In the proposed structural model it is hypothesised that WLC mediates the relationship between role overload and burnout among nurses.

The p-value for the Sobel test of WLC as a mediator of the relationship between role overload and burnout was $p = .00$, which means that WLC does have a statistically significant mediating effect on the relationship between role overload and burnout. When the mediating effect of WLC on the relationship between role overload and burnout was tested further in terms of PLS-SEM, the same result was found. All three paths were statistically significant (.443; .420; .245), indicating a partial mediation.

Hypothesis 16: In the proposed structural model it is hypothesised that WLC mediates the relationship between emotional labour and burnout among nurses.

The p-value for the Sobel test of WLC as a mediator of the relationship between emotional labour and burnout was $p = .00$, which means that WLC does have a statistically significant mediating effect on the relationship between emotional labour and burnout. When this mediating effect of WLC on the relationship between emotional labour and burnout was tested further in terms of PLS-SEM, a different set of results was found. The hypothesised mediating effect of WLI on the relationship between emotional labour and burnout was not found to be statistically significant. The two indirect paths were not significant (.130 and .108) and the direct path was significant with a value of .245, indicating no mediation. As decided before, the Sobel test result is regarded as the strongest indication of a mediation effect.

Hypothesis 17: In the proposed structural model it is hypothesised that WLC mediates the relationship between care-giving responsibilities and burnout among nurses.

The p-value for the Sobel test of WLC as a mediator of the relationship between CGR and burnout was $p = .20$, which means that WLC does not have a statistically significant mediating effect on the relationship between CGR and burnout. When the mediating effect of WLC on the relationship between CGR and burnout was tested further in terms of PLS-SEM, the same result was found. The hypothesised mediating

effect of WLC on the relationship between CGR and burnout was again found to be **not statistically significant**. The two indirect paths were insignificant (.207 and -.021) and the direct path was significant with a value of .245, indicating no mediation.

Hypothesis 15 was therefore supported in the case of both the Sobel test approach and the PLS-SEM approach. This means that WLC has a mediating effect on the relationship between role overload and burnout under nurses. Hypothesis 16 was supported by the findings of the Sobel test which reached statistical significance, whereas the PLS-SEM results did not support the hypothesis. As previously mentioned, it was decided for this study to focus on the results of the Sobel test to determine significance of mediation effects, thus Hypothesis 16 is found to be significant. Both the Sobel test and the PLS-SEM findings did not support Hypothesis 17, indicating that WLC does not mediate the relationship between CGR and burnout. The two mediating hypothesis that were supported, constitute a valuable contribution to research in the healthcare system. The findings of this study indicate that work-life conflict plays a mediating role in the relationship between both role overload and burnout; and emotional labour and burnout under nurses. Thus work-life conflict exacerbates the impact of role overload and emotional labour on burnout.

The significant and non-significant path coefficients in the inner model are illustrated in Figure 4.1.

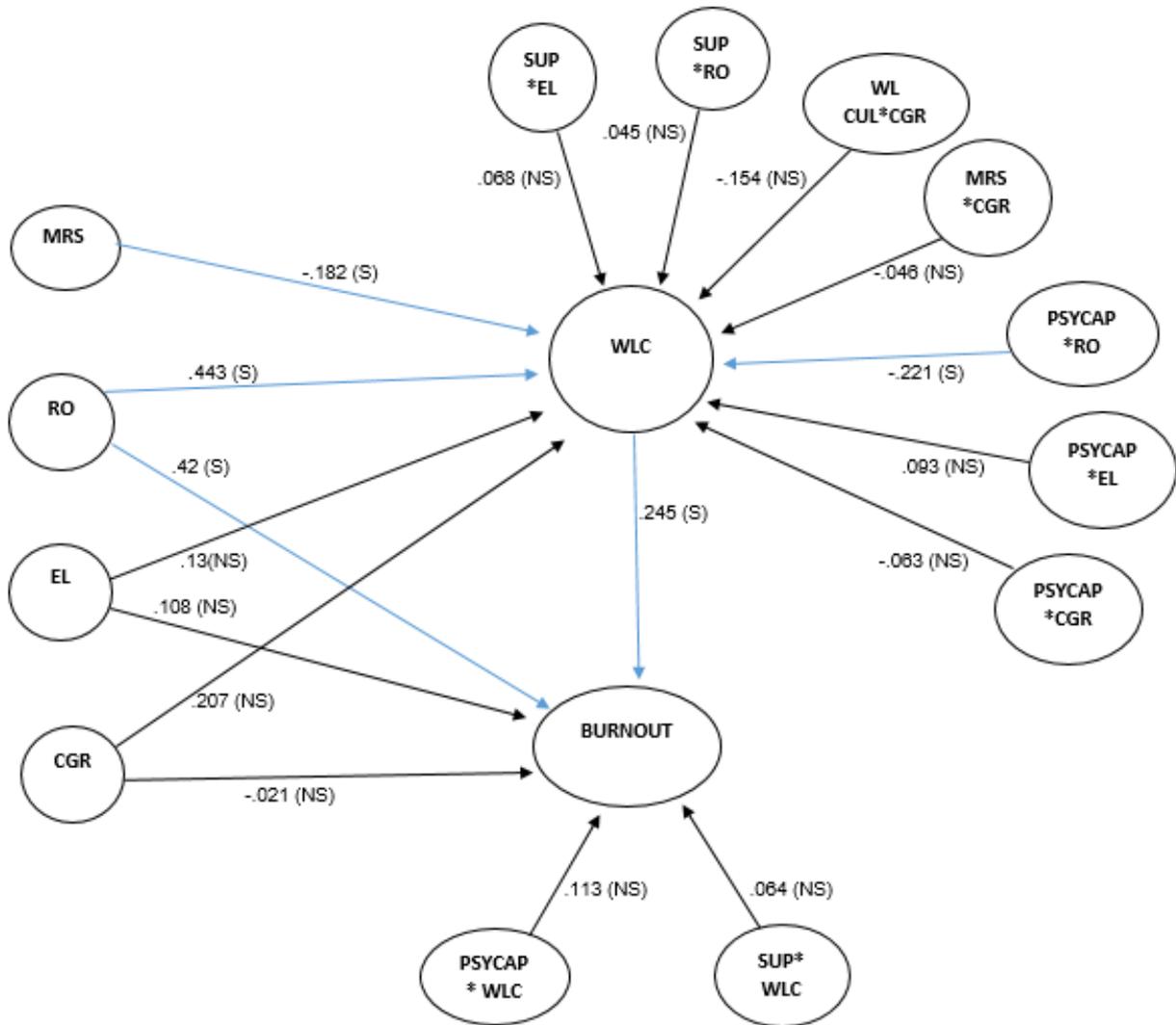


Figure 4.1. Structural Model with Path Coefficients

*MRS= Marital satisfaction; RO = Role overload; EL= Emotional labour; CGR= Care-giving responsibilities; WL CUL= Work-life culture PSYCAP= Psychological capital; SUP= Organisational support; WLC= Work-life conflict.

4.4 CHAPTER SUMMARY

This chapter described the results of the study that were obtained through the different statistical techniques and methods. First the measurement model was evaluated by looking at the reliability of the different measurements through the item analysis of each subscale. PLS was used to further investigate the reliability of the subscales used

to measure the latent variables. After that, the structural model was analysed. Lastly the hypothesised relationships, namely the main, moderating and mediating effects were interpreted. However, it is important to note that no individual items were removed after the item analysis was conducted, this was decided prior to the commencement of the study. This was done to ensure the comparability of the results and to ensure that the construct validity of the instruments utilised is not compromised.

Of all eight main effects hypotheses, only four hypotheses were supported. Hypotheses 1, 2, 3 and 12 were supported, whereas hypotheses 4, 5, 9 and 10 were not supported. In the case of the moderating effects only one hypothesis was supported, namely hypothesis 13 (PsyCap moderates the relationship between role overload and work-life conflict). The rest of the moderating hypotheses, 6, 7, 8, 11 and 14 were not supported. Hypotheses 15, 16 and 17 tested the mediating effects in this study, and only two of the three mediating paths were significant (work-life conflict has a mediating effect on the relationship between role overload and burnout, as well as a mediating effect on the relationship between emotional labour and burnout).

Chapter 5 will provide a discussion of the results, outline the limitations of this study, and provide recommendations with respect to the practical implementation of the findings, as well as with respect to future studies.

CHAPTER 5

DISCUSSION AND RECOMMENDATIONS

5.1 DISCUSSION OF THE RESULTS

The main objective of this study was to gain a valid understanding on why some nursing professionals have the ability to cope well with work and family demands and are capable of balancing it, with the aid of the resources that are available to them. The research initiating question asked: “why variance in work-life conflict and the impact thereof on burnout exists amongst nurses working in the same organisational contexts/hospital in South Africa”. Taking the reported results into consideration, one could say that the study has met its objectives.

Of all the eight main effects hypotheses formulated, only four hypotheses were supported by the results, namely hypotheses 1, 2, 3 and 12. Hypothesis 1 was supported by finding a positive relationship between work-life conflict and burnout. This finding is compatible with the role conflict theory which states that time and energy resources are limited. Meaning that time and energy spent on family life cannot be invested in work life, and vice versa, and this can result in burnout (Ten Brummelhuis et al., 2008). Mitchelson (2009) also found that work-life conflict is associated with higher levels of burnout. It could be hypothesised that the nursing profession is an emotionally and physically demanding profession and that burnout and work-life conflict are common consequences of this professional work environment.

Hypothesis 2 suggested a positive relationship between role overload and work-life conflict, while Hypothesis 3 suggested a positive relationship between role overload and burnout. Both of these hypotheses were supported by the results. Role-overload is a type of time-based role-conflict; where there is not enough time and resources for the multiple roles (Higgins et al., 2010). According to Hanif and Raza Naqvi (2014) the excessive pace and amount of work nurses have to fulfil, will likely lead to exhaustion and burnout. Time is a limited resource and for a nurse to have too many things to attend to in both their work life and family life, may lead to them experiencing burnout as a negative consequence of work-life conflict.

Lastly, Hypothesis 12 suggested a negative relationship between marital satisfaction and work-life conflict. This hypothesis was also supported by the results. Matias and Fontaine (2012) studies have shown that with dual-earner families their balance of work and family is better when there are higher levels of marital satisfaction. The reverse could actually also be true and that is that their marital satisfaction is due to their ability to achieve work-life balance. As Shree (2012) stated, spouses who experience marital satisfaction, will have effective communication with their partner, and will have less conflict over taking care of their children and their finances. All these factors are likely to be liked to family and job demands.

Hypotheses 4, 5, 9 and 10 of the main effects were not supported by the results, which can be due to many reasons. The results indicated that emotional labour does not have a positive relationship with WLC, nor does it have a positive relationship with burnout. The results clearly disconfirm previous results regarding the impact of burnout, especially in the nursing profession. The theory of Chou et al. (2012) states that emotional labour can be seen as a job demand, and is likely to lead to emotional exhaustion under nurses. When a nurse uses surface acting in dealing with their patients, it increases their emotional dissonance, and could be regarded as a contributing factor towards emotional exhaustion. Emotional dissonance is less possible in the case of deep acting; thus deep acting is not likely to result in burnout (Bozionelos & Kiamou, 2008). In the case of the bivariate correlations observed in the current research project, both patient and work burnout were significantly related to surface acting, supporting the theory of Bozionelos and Kiamou. The non-significance of these two hypothesised relationships could also be due to the fact that the AVE score of emotional labour was low and that it was red flagged. It could be hypothesised that using the total score for emotional labour masks the very real effect of surface acting.

The findings (hypothesis 9) that nurses who have care-giving responsibilities will not necessarily experience work-life conflict, and that it does not have a positive effect on the level of burnout they may experience, contradicts logic. These findings also contradicts previous findings that indicate that having children and adult dependants is associated with work-life conflict and burnout (Ohja, 2011). According to Schmidt (2011) caring for children and adults will lead to a negative spill-over effect from family

to work life. Rantanen et al. (2008) also found that neither work-family conflict nor family-work conflict had long-term associations with exhaustion and parental stress. This contradicting findings could be due to the fact that the operationalisation of this variable in the current study is too simplistic and superficial. Simply using the number of children and the number of adult dependents probably does not capture the impact of care-giving responsibilities.

With respect to the moderating effects, only one hypothesis was supported, namely hypothesis 13, which states that PsyCap moderates the relationship between role overload and work-life conflict. This hypothesis confirms Theo et al.'s (2014) suggestion that nurses make use of their personal resources to handle the challenges of their job demands and PsyCap reduces the role stress levels nurses are experiencing. The results of this study provide further evidence that PsyCap can combat the effects of job demands, such as role overload. This finding supports the fact that personal resources can moderate the impact of unfavourable work characterises on negative outcomes, in this case PsyCap is the personal resource, and the unfavourable work characteristic is role overload, with work-life conflict being the negative outcome.

The two other hypothesised moderating effects were not significant, namely PsyCap as a moderator of the relationship between emotional labour and work-life conflict and PsyCap as a moderator of the relationship between care-giving responsibilities and work-life conflict. These findings are in contrast with previous findings that stated that PsyCap will buffer the effect of job and/or family demands on work-life conflict. In this study neither the constructs emotional labour nor care-giving responsibilities had direct relationships with work-life conflict, therefore it reduces the likelihood that PsyCap will have a moderating effect on these two relationships.

The rest of the moderating hypotheses, namely hypotheses 6, 7,8,11 and 14 were not supported. In Hypothesis 6 it was hypothesised that organisational support (from co-workers and supervisors) moderates the impact of the job demands, role overload and emotional labour, on WLC among nurses. The results, however, did not support this hypothesis. The results did not support Hypothesis 7 as well, which hypothesised that organisational support (from co-workers and supervisors) moderates the impact of WLC on burnout among nurses. Previous research indicated that social support can

be a source of support for both the family domain and work domain (Ohja, 2011). Ten Brummelhuis et al. (2012) argued that social support can help employees to balance their work and family lives. The results are therefore in contrast to the theoretical inference that social support has a strain-reducing effect (Ohja, 2011; Warren & Johnson, 1995).

This contradictory nature of the results could be ascribed to the fact that the study did not look at the different types of social support and which specific type would benefit an employees family domain and work domain respectively. Most of the previous research focus on the same domain effect for social support, and not on the cross domain effect like in the current study. Meaning the relationship between work social support and work-family conflict and then between family support and family-work conflict. According to Selvarajan, Cloninger and Singh (2013), most studies found a weak and non-significant relationship for cross domain relationships between social support and work-family conflict. These two unexpected findings add value in as far as the findings indicate that organisation support does not moderate the effect of job demands on work-life conflict and nor does it moderate the effect of work-life conflict on burnout. Consequently more research needs to be done on the specific nature of social support required for it to have the hypothesised moderating effect.

Hypothesis 8 hypothesised that a supportive work-life culture moderates the impact of care-giving responsibilities on the WLC of nurses. The hypothesis was, however, not confirmed by the results. This finding contradicts the existing evidence that a supportive organisational culture culminating in an EAP (Hooja, 2012); structural-and-cultural work-life policies (Kossek et al., 2010); on-site childcare centres and personal life coaching (Hawksley, 2007); as well as organisation friendly benefits (Warren & Johnson, 1995) does have a negative relationship with work-life conflict and burnout experienced by employees. This supportive work-life culture probably overlaps with the organisational support tested in the previous moderating hypotheses.

With regard to marital satisfaction, the literature showed that married women and mothers experience more work-life conflict than unmarried single females (Opie & Henn, 2013), and that work-life conflict and stress is associated with lower levels of marital satisfaction (Shree, 2012). Thus marital satisfaction can be seen as a family resource in handling work-life conflict and burnout. The results of the current study

could not confirm that marital satisfaction moderates the impact of care-giving responsibilities on the WLC experienced by nurses. This finding is perhaps not surprising given the fact that no direct relationship was found between the variables care-giving responsibility and work-life conflict.

Hypothesis 14 proposed that PsyCap moderates the impact of WLC on burnout among nurses, but the results did not support it. In contrast Wang et al. (2012) found that the level of burnout experienced by nurses suffering from work-life conflict is lower if they have PsyCap as a personal resource. Yardley (2012) also claimed that an individual with high levels of PsyCap will see work-life conflict as a challenge and will overcome it and not develop burnout. The results of this study, which suggest that PsyCap does not play a moderating role between WLC and burnout, can be due to the fact that the nurses does not make use of their personal resources, namely PsyCap, but rather made use of other resources (job/family/personal). Other external factors may have influenced the state-like personal resource, PsyCap, diminishing its impact. Moreover, few, if any, studies were found to have been conducted on specific moderating variables and their moderating effects in this context. Consequently, more research needs to be done on the moderating effects of the specific resources and demands.

Hypotheses 15, 16 and 17 tested the mediating effects in this study, and only two of the three mediating effects were significant. The findings indicated that work-life conflict plays a mediating role in the relationship between role overload and burnout relationships. Research has indicated that there is a relationship between work-life conflict and burnout, as well as between work-life conflict and role overload (Ahmad, 2010; Yardley, 2012), thus this study argued that work-life conflict mediates the relationship between role overload and burnout. Such a mediation effect can be based on the COR theory that nurses seek to acquire resources to reduce stress (Ahmad, 2010). Ahmad's (2010) research found that work-life conflict mediates the relationship between role overload and emotional exhaustion (which is one dimension of burnout). This just means that role overload can increase the work-life conflict experienced by nurses, which could also increase the emotional exhaustion (burnout) experienced by nurses.

The next mediating Hypothesis, hypothesis 16, which stated that work-life conflict has a mediating effect on the relationship between emotional labour and burnout, was supported. There is unfortunately a scarcity of research on the link between work-life conflict, emotions and burnout. This could be because employers believe that they have the right to ask employees about their physical and cognitive activities, but that emotional experiences are regarded as more private. Montgomery, Panagopolou, De Wildt and Meenks (2005) studied the mediating role of work-life conflict. Their study results partially supported the mediating effect of work-life conflict in the relationship between surface acting and cynicism, but did not support the mediation effect of work-life conflict on the relationship between deep acting and cynicism. Pugh et al. (2011) criticises the use of cynicism and claims that surface acting is more likely to lead to burnout. A study conducted by Smith (2013) found the same results as this current study hypothesis, that work-life conflict partially mediated the relationship between surface acting (emotional labour) and emotional exhaustion (burnout). The results of this current research study proves that emotional labour can increase work-life conflict experience by nurses which could also increase the cynicism (burnout) experience by nurses.

Hypothesis 17, which states that work-life conflict has a mediating impact on the relationship between care-giving responsibilities and burnout, was not supported in the current study. This is in contrast to the literature stating that parents will have higher levels of work-life conflict and burnout because of all the parental demands they have (Raisinghani & Goswami, 2014). The current results indicate that care-giving responsibilities does not mediate the effect of work-life conflict on burnout. A reason for this finding could be that the study just focuses on the family structure (such as the number of children or adult dependants) and not on the family tasks (such as the time spent on household chores and childcare).

The results of this study indicates that the management of this hospital needs to put interventions in place in order for the nurses to cope with their specific job demands and family demands. The hospital could focus upon those demands and resources that were significant predictors in order to enhance these resources and help the nurses in dealing with their job and family demands efficiently

5.2 MANAGERIAL IMPLICATONS OF THE RESULTS

The empirical findings of this research project could be regarded as of great value to managers in the workplace. The PLS path analysis provided valuable information regarding the proportion of variance explained in the model, the results indicated that, in the case of burnout, the model accounted for 63.6% of the variance in burnout, and in the case of the work-life conflict, the model accounted for 66.9% of the variance observed in work-life conflict experienced by nurses.

It should thus be possible to attempt to reduce work-life conflict and burnout amongst the nurses by focusing on the significant but non-optimal predictors in the structural model, or by directly attempting to promote the level of work-life balance amongst the nurses.

5.2.1 Reducing Job Demands (Organisational Level Intervention)

In the current study it was evident that role overload contributes to the levels of work-life conflict and burnout experienced by nurses, as both pathways between role overload and burnout, as well as role overload and work-life conflict, displayed a positive statistically significant relationship. Bakker, Demerouti, and Sanz-Vergel (2014) were optimistic about the possibility of reducing job demands and the negative effects associated with these demands. One way of achieving this is by focussing on job redesign, which is seen as a way to increase the well-being of employees. Job redesign is a top-down process, where managers change the job tasks, responsibilities, and roles with the aim to promote the demands-resources balance of the employees. With role overload specifically, the time and energy demands are draining for nurses. The job structure and job content can be changed for nurses, in order to, amongst other outcomes, deal with their perception of some tasks as illegitimate tasks, despite having to perform them every day. Examples of job redesign would be to increase job sharing, autonomy, and flexible hours under the nurses, and also increase the perceived support from the supervisors given the heavy workload nurses have to attend to.

The main causes of role overload under nurses, is the shortage of nurses, and the hiring of incompetent nurses. Therefore the recruitment process of nurses is important.

A recruitment programme can be used to hire nurses who are competent, and who possess hard-working work habits, as well as selecting nurses who show a higher capacity for team-work and social supportive skills. A personality questionnaire may be utilised to identify nurses who have the required characteristics. It may also be beneficial to create an appropriate job description and a scope of practice that the nurses must adhere to. In this way the nurses will know which tasks to focus upon, and which tasks fall outside their job description. A role clarification and team building intervention can also be considered to combat the role overload that nurses are experiencing.

The managers of the hospital can also administer a job demands and resources survey, to identify which job demands and resources the hospital should focus upon in order to decrease the nurses' levels of work-life conflict and burnout.

With the specific focus on the job demands nurses may experience (for instance role overload), a time management training course may also be considered as an intervention. Time management is essential for nurses given the demanding nature of their career, as the resource "time" is always in short supply. The training course can focus on tips on how to effectively manage their time by planning and prioritising, so that the nurses may provide better care for themselves and their patients. Nurses can be taught the pickle jar theory - the idea behind this theory is to only schedule your high priority tasks for the day, and leave gaps for the less important tasks throughout the day. This is compared to first fitting large pebbles into the pickle jar, and then adding the small pebbles and sand; whereas if you first fill the jar with small pebbles, you would not be able to fit the large pebbles into the jar (Said, 2013). According to Walker, Wysocki and Kepner's study and Jones' findings (cited in Said, 2013) the following tips of time management can be communicated to the nurses:

- It is important to prioritise your tasks, such as patient care duties and re-prioritise as the events unfold throughout the day;
- Follow the strategy of getting the job done right the first time;
- Delegate tasks if you are under too much pressure;
- It is better to avoid procrastination;
- If you arrive earlier than your usual time, you can plan your work for the day;

- If you make a list of things that needs to be done, you will not forget the important tasks that needs to be completed;
- Be conscious of the amount of time you spend on each task;
- Allow time in your day for unscheduled activities;
- Organise your home life, by delegating/prioritising tasks at your home.

With the improved skill of time management, nurses can balance their work and home life more effectively, helping them with work-life conflict and also reducing their stress levels. It is known that work-life balance development training in stress-and-time management and reducing job demands (in this case role overload) will lead to increased job satisfaction. It is important to attend to the nurses' needs and to create a congenial working atmosphere, as they play a major role in the healthcare industry (Santhana Lakshmi, Ramachandran & Boohene, 2012; Tims, Bakker & Derks, 2012).

5.2.2 Increasing Personal Resources (Organisational Level Intervention)

The confirmation found for the role of PsyCap as a moderator of the relationship between role overload and work-life conflict means that individuals with lower levels of PsyCap may experience the impact of role overload on work-life conflict in an increased way, in contrast to those with higher levels of PsyCap, in whose case the impact will be diminished. If the hospital has a larger group of nurses with lower levels of PsyCap, it could be of value to arrange on-the-job training for them.

According to Bakker et al. (2014) training and development is important in the Human Resource functions, because training is seen as an investment in a company's employees and a further development of their employees' skills, knowledge and problem solving abilities. Training, especially with respect to personal recourses, can help the nurses to execute their daily work at the hospital and their work as a parent/spouse at home in a more efficient way. As PsyCap may have many benefits for organisations and their employees, it is thus important to consider as a manager how to increase the PsyCap levels of your employees.

One intervention that has been proven to increase PsyCap effectively has been that of the PsyCap Intervention (PCI) developed by Luthans, Avey, Avolio, Norman and Combs (2006). The PCI has been shown to improve all of the dimensions of PsyCap

through its tried and tested method. This method requires very little time to implement and may be administered in class settings, small discussion groups or even through an online training programme in as little as two hours.

The PCI involves a number of steps that allow the dimensions of PsyCap to influence one another. Firstly, the dimension of hope is targeted by allowing the nursing participants to identify work-related goals that are both personal to them, as well as challenging. The nursing participants are then asked to generate multiple pathways to help them realise these goals and to identify any potential obstacles that could prevent them from achieving success. Each participant will then be put into a small discussion group where they can share with others and receive feedback on their pathways and potential obstacles. This is expected to allow the development of additional pathways for achieving goals and overcoming obstacles that had not been considered previously. This practice is likely to increase the pathway generation capabilities of the nurses, as well as their ability to plan for obstacles. It is expected that during this process the nurse's efficacy in achieving their goals should be enhanced. This process should also lead to the creation of more positive expectations of the future for the nurses, enhancing their subsequent levels of optimism (Luthans et al., 2006).

Resilience is considered to be developed through deriving multiple pathways to achieving goals. This logic stems from the belief that resilience involves positively coping with setbacks or failure when a goal is not reached, requiring the participants to select alternative pathways to their goals. Multiple pathway generation allows for this, allowing the nursing participants to bounce back and overcome setbacks that they face, subsequently increasing their self-confidence. In addition to multiple pathway generation, nurse participants may be asked to list all their assets, such as education, skills, experience, as well as personal and organisational resources they have access to, such as friends, family, co-workers, mentors, assistance programmes and supplementary budgets, that they could make use of in aiding them to achieve their goals and increase their persistence (Luthans et al., 2006).

The PCI has been proven to be effective at increasing PsyCap in work environments. In a study that utilised a two-hour online version of the PCI, the online version was shown to hold better results than a team building and leadership exercise (Luthans, Luthans & Avey, 2013). Due to the nature of the nursing environment (working with

patients and life threatening situations), it must be taken into account that the PCI can be time-consuming, thus the alternative shorter PCI web-based intervention can be considered for the hospital.

When hiring nurses, the recruitment team can make use of the 24 item PsyCap scale developed specially to measure the 4 domains of PsyCap. This battery can be utilised as a selection tool in order to appoint nurses with the desired level of PsyCap. A high level of PsyCap will help the nurse in the highly demanding and stressful environment of the hospital, especially those nurses who have to deal with family demands as well. The development of PsyCap among the leaders (managers/supervisors) of the hospital may even be more beneficial due to the possibility that increased levels of PsyCap in leaders may lead to a legitimate sense of hope and optimism amongst their followers, as a result of their open nature. In this way their level of PsyCap may lead to further increasing the level of PsyCap of their followers (Avey, Richmond & Nixon, 2012). Leaders who also exhibit the characteristics of transformational leadership are very likely to increase PsyCap in their followers by increasing their followers' self-efficacy, facilitating the followers' identification within the group and by linking the organisation's work values to their followers' values (Gupta & Singh, 2014). Developing PsyCap should therefore start with the leaders, especially because PsyCap has been repeatedly shown to be related to the workplace performance of both leaders and followers (Avey, et al., 2012).

5.2.3. Individual Interventions

The hypothesised relationship between marital satisfaction and work-life conflict was proven to be statistically significant, which means that when nurses display marital satisfaction, they tend to have lower levels of work-life conflict. Some nurses may lack this family resource (marital satisfaction) due to the demands of their organisation, or the demands of their personal lives. These demands may come in the form of changes in the hospital or family environment, and a personal coach could be utilised to guide nurses to handle the changes effectively. According to Hawksley (2007, p. 35) personal life coaching is defined as: "an interactive process during which the coach uses a variety of skills and techniques which encourage the client to learn and develop and so improve personal performance". A study by Staffordshire University on the effectiveness of coaching indicated that coaching had a positive effect on the

effectiveness of nurses at work, as it improved areas such as time management, communication, decision-making, and helped them faced new challenges in their work and personal lives (Hawksley, 2007).

The personal life coach may focus on some major factors that influence marital dissatisfaction among the married nurses. Research shows that spending more time on the job may lead to work-spouse conflict; while the work schedules of nurses are largely beyond their control, which may lead to more marital dissatisfaction. When nurses have low levels of commitment and control over their work and spouse, it will lead to more work-spouse conflict (Shree, 2012).

Another possible individual intervention that may be considered is job crafting training, where the job crafting is initiated by the nurses themselves and where they choose to proactively change their demands and resources (such as job, family and personal), by choosing tasks, negotiating different and more preferred job content, and assigning more meaning to the jobs or tasks they do (Bakker et al., 2014). Another intervention is strength-based training, where the nurse learns to set personal goals and use strengths at work in a new way, especially personal resources that have been developed through the Psychological Capital Intervention (PCI) (Bakker et al., 2014).

The interventions discussed (organisational and individual) can be beneficial for both the employee and the hospital. These interventions and training are critical requirements in the human resource management of nurses, and if the hospital invests in their nurses in this fashion, the hospital can be assured that it will be able to meet its longer term goals.

5.3 LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

There are several limitations inherent to this study, but these limitations do not really undermine the results of the current study. The limitations discussed could be used to sensitise future researchers to the same challenges.

The sample size of 106 nurses was satisfactory, but a larger sample size would have made the results more credible. The non-significant relationships between some of the constructs could be due to the small sample size.

The work schedule of the nurses completing the questionnaire made it difficult to concentrate on the questionnaire, as they were busy with patients, worked long shifts, and were then still expected to take 20 minutes to complete the questionnaire. The fact that the questionnaire also deals with emotive matters that may fluctuate, depending on whether the nurses were experiencing a good or a bad day, and therefore their current mood, could have also affected their responses.

This study also just focused on one hospital in Bloemfontein, with the result that it would be difficult to generalise the results of this study to the larger population. It is recommended that future studies attempt to procure a larger sample from more than one hospital (private and public hospitals), which is stratified in order to represent the different departments involved in the healthcare systems.

The questionnaire was administered in English. Some of the nurses who speak Afrikaans or any other first language, could have found it difficult to interpret the items of the questionnaire. Items could have also been confusing in terms of how they were stated in the questionnaire. Fortunately most of the different scales used in this study showed good psychometric properties, except the emotional labour scale. It is therefore recommended that further validation of the emotional labour scale be conducted in the South Africa context. In future studies the surface acting scale could perhaps be elevated to latent variable status, replacing the overarching emotional labour construct in the structural model.

When the unexpected findings with respect to the disconfirmed hypotheses are considered, it begs the question as to whether the decision to treat NWHI and NHWI as indicators of the overarching latent variable of WLC (in the interest of reducing the number of parameters) did not obscure real differences in the nature of the interrelationships between the predictors and these two potential intermediate dependent variables. Inspection of Appendix 1 reveals that the PsyCap subscales, Surface Acting and Marital Satisfaction had stronger correlations with NHWI than with NWHI, although NWHI had stronger correlations with the indicators of Burnout. One should therefore consider utilising both NWHI and NHWI as latent variables in the same model or investigate two separate models with NWHI and NHWI as intermediate dependent variables.

Furthermore, some of the items of the questionnaire were reversed scored. Some examples of the questionnaire that were reversed scored are as follows: The CBI questionnaire Item 10 (Do you have enough energy for family and friends during leisure time?); the PCQ Item 13 (When I have a setback at work, I have trouble recovering from it, moving on), Item 20 (If something can go wrong for me work-wise, it will), and Item 23 (In this job, things never work out the way I want them to). Five items from the marital satisfaction scale were also reverse scored (Item 1: I am not pleased with the personality characteristics and personal habits of my partner; Item 3: I am not happy about our communication and feel my partner does not understand me; Item 5: I am unhappy about our financial position and the way we make financial decisions; Item 8: I am not satisfied with the way we each handle our responsibilities as parents and Item 9: I am dissatisfied about our relationship with my parents, in-laws, and/or friends). Lastly 4 items of the work-life culture questionnaire were reversed scored (Item 4: My supervisor accommodates me when I have family or personal business to take care of - for example, medical appointments, meeting with child's teacher, etc.; Item 5: My supervisor is understanding when I talk about personal or family issues that affect my work; Item 6: I feel comfortable bringing up personal or family issues with my supervisor and Item 7: My supervisor really cares about the effects that work demands have on my personal and family life). Language proficiency may play a role in the nurses' understanding of these reverse scored items. Future researchers could consider rewriting the items in a positive way and re-evaluating the psychometric properties before they use the questionnaire in their studies.

Another limitation can be that this study used a self-administered questionnaire. This method has the possible disadvantage of impression management through social desirability responding. The nurses could have responded in a social desirable way in order to create a more favourable impression of themselves. Even though the nurses were assured that their responses will be anonymous and confidential, they still could have mistrusted these assurances, which could have had a negative impact on the authenticity of their responses to the questionnaire.

This study only focussed on a few variables as determinants of work-life conflict and burnout. There are, however, a number of other job, family and personal demands and resources that were excluded from this study. This could have had a negative effect

on the results of this study, as it is quite possible that other salient variables may not have been included in this study. It would therefore be a good idea for future studies to include more variables in order to increase the predictive power of the model to explain work-life conflict and burnout among nurses. The inclusion of more family demands and resources, as well as personal resources should prove especially fruitful.

5.4 CHAPTER SUMMARY

The overall aim of this study was to explore the relationship between the different demands and resources (job, family and personal), work-life conflict and burnout among the nurses. In addition to evaluating the direct relationships, the moderating and mediating effects of some of the constructs were also studied, namely: organisational support, work-life conflict, marital satisfaction and PsyCap.

This study contributes to existing body of knowledge regarding the role of demands, resources, work-life conflict and burnout by providing insight into the relationships between these constructs. This study also provided the administration of this hospital with valuable information that could be utilised in an attempt to decrease work-life conflict and burnout. The study provided evidence that role overload leads to increased work-life conflict and the experience of burnout among nurses. The study also contributes to the understanding that marital satisfaction has a negative relationship with work-life conflict. The findings can be used as a rationale for focusing on marital satisfaction and PsyCap in an attempt to decrease the levels of work-life conflict among nurses in their workplace and at home. In addition, role overload can be decreased, so that the nurses will experience lower levels of work-life conflict and burnout.

In conclusion, in this chapter the managerial implications of the findings; the research limitations, and recommendations for future research were discussed.

REFERENCES

- Ahmad, A. (2010). Work-family conflict among junior physicians: Its mediating role in the relationship between role overload and emotional exhaustion. *Journal of Social Science*, 6(2), 265-271.
- Ahuja, M., Chudoba, K. M., George, J. F., Kacmar, C., & McKnight, H. (2002). *Overworked and isolated? Predicting the effect of work-family conflict, autonomy, and workload on organizational commitment and turnover of virtual workers*. Retrieved March 23, 2015, from http://www.hicss.hawaii.edu/HICSS_35/HICSSpapers/PDFdocuments/OSVWE06.pdf
- Al-Serkal, A. (2006). *Does emotional labour influence the well-being and retention of cabin crew*. Unpublished doctor's thesis, The University of Leeds, Pennsylvania, England.
- Aryee, S., Srinivas, E. S., & Tan, H. H. (2005). Rhythms of life: Antecedents and outcomes of work-family balance in employed parents. *Journal of Applied Psychology*, 90(1), 132-146.
- Avey, J. B., Richmond, F. L., & Nixon, D. R. (2012). Leaders positively and follower creativity: An experimental analysis. *The Journal of Creative Behavior*, 46(2), 99-118.
- Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: The JD-R approach. *Annual Review of Organizational Psychology and Organisational Behaviour*, 1(1), 389-411.
- Bakker, A. B., Van der Zee, K. I., Lewig, K. A., & Dollard, M. F. (2002). The relationship between the Big Five personality factors and burnout: A study among volunteer counselors. *The Journal of Social Psychology*, 135(5), 1-20.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, US: Freeman.
- Barker, G., & Pawlak, P. (2011). *Men in Families and Family Policy in a Changing World*. New York (NY): United Nations publications.

- Barnett, R. C., & Marshall, N. L. (1992). Men's job and partner roles: Spillover effects and psychological distress. *Sex Roles, 27*, 455-472.
- Bauer, J. C. (2010). Nurse practitioners as an underutilized resource for health reform: Evidence-based demonstrations of cost-effectiveness. *Journal of the American Academy of Nurse Practitioners, 22*(4), 228-231.
- Beauregard, T. A., & Henry, L. C. (2009). Making the link between work-life balance practices and organizational performance. *Human resource management review, 19*, 9-22.
- Bezuidenhout, C. (2013). *The elaboration and empirical evaluation of a partial talent management competency model*. Unpublished master's thesis, University of Stellenbosch, Stellenbosch.
- Bless, C., Higson-Smith, C., & Karee, A. (2006). *Fundamentals of social research methods: An African perspective* (4th ed.). Cape Town, SA: Juta Education (Pty) Ltd.
- Bond, S. (2004). Organisational culture and work-life conflict in the UK. *International Journal of Sociology and Social Policy, 24*(12), 1-24.
- Bonds-Raacke, J. M., Bearden, E. S., Carriere, N. L., Anderson, E. M., & Nicks, S. D. (2001). Engaging distortions: Are we idealizing marriage? *The Journal of Psychology, 135*(2), 179-184.
- Borritz, M., & Kristensen, T. S. (2004). *Copenhagen Burnout Inventory*. Retrieved March 1, 2016, from <http://www.arbejdsmiljoforskning.dk/upload/cbi-scales.pdf>
- Borritz, M., Rugulies, R., Bjorner, J. B., Villadsen, E., Mikkelsen, O. A., & Kristensen, T. S. (2006). Burnout among employees in human service work: design and baseline findings of the PUMA study. *Scandinavian Journal of Public Health, 34*, 49-58.
- Bozionelos, N., & Kiamou, K. (2008). Emotion work in the Hellenic frontline services environment: How it relates to emotional exhaustion and work attitudes. *The International Journal of Human Resource Management, 19*(6), 1108-1130.

- Carter, S. B. (2012). *Where do you fall on the burnout continuum?* Retrieved January 10, 2015, from <http://www.psychologytoday.com/blog/high-octane-women/201205/where-do-you-fall-the-burnout-continuum>.
- Casey, P. R., & Grzywacz, J. G. (2008). Employee health and well-being: The role of flexibility and work-family balance. *The Psychologist-Manager Journal*, 11, 31-47.
- Cegarra-Leiva, D., Sa´nchez-Vidal, M. E., & Cegarra-Navarro, J. G. (2012). Understanding the link between work-life balance practices and organisational outcomes in SMEs. The mediating effect of a supportive culture. *Personnel Review*, 41(3), 359-379.
- Chang, E. M., & Hancock, K. M. (2003). Role stress and role ambiguity in new nursing graduates in Australia. *Nursing & Health Sciences*, 5(2), 155-163.
- Charoensukmongkol, P. (2014). Effects of support and job demands on social media use and work outcomes. *Computers in Human Behavior*, 36, 340-349.
- Cherry, K. (2013). *Correlational studies: How correlational studies are used in psychology research*. Retrieved October 20, 2014, from <http://psychology.about.com/od/researchmethods/a/correlational.htm>
- Cherry, K. (n.d). *What is Industrial Organizational Psychology*. Retrieved on April 18, 2014, from <http://psychology.about.com/od/iopsychology/f/organizational.htm>.
- Cheung, F., Tang, C. S., & Tang, S. (2011). Psychological capital as a moderator between emotional labor, burnout, and job satisfaction among school teachers in China. *International Journal of Stress Management*, 18(4), 348-371.
- Cheung, F. Y., & Tang, C. S. (2012). The effect of emotional dissonance and emotional intelligence on work-family interference. *Canadian Journal of Behavioural Science*, 44(1), 50-58.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods of business research* (pp. 295-358). Mahwah, NJ: Lawrence Erlbaum Associates.

- Chou, H. Y., Hecker, R., & Martin, A. (2012). Predicting nurses' well-being from job demands and resources: a cross-sectional study of emotional labour. *Journal of Nursing Management*, 20, 502-511.
- Davison, A. C., Hinkley, D. V., & Young, G. A. (2003). Recent developments in bootstrap methodology. *Statistical Science*, 141-157.
- De Goede, J. (2007). *An investigation into the learning structure of the learning potential construct as measured by the APIL test battery*. Unpublished master's thesis, University of Stellenbosch, Stellenbosch.
- Demerouti, E., & Bakker, A. B. (2011). The job demands–resources model: Challenges for future research. *SA Journal of Industrial Psychology*, 37(2), 1-9.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demand-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499-512.
- De Sousa, V. A. G. F. (2013). *Family-work conflict, job satisfaction and burnout of working women with children*. Unpublished doctor's thesis, University of Pretoria, Pretoria.
- De Villiers, C. (2015). *The relationship between emotional labour, the HEXACO personality traits, work engagement and burnout in the hospitality industry*. Unpublished master's thesis, University of Stellenbosch, Stellenbosch.
- De Villiers, J., & Kotze, E. (2003). Work-life balance: a study in the petroleum industry. *SA Journal of Human Resource Management*, 1(3), 15-23.
- Dimitrios, B., & Konstantinos, V. (2014). Organisational culture and burnout- a review. *International Journal of Research in Business Management*, 2(1), 43-62.
- Duxbury, L., Lyons, S., & Higgins, C. (2008). Too much to do, and not enough time: An examination of role overload. In K. Korabik., D.S. Lero., & D.L. Whithead (Eds.), *Handbook of Work-Family Integration: Research, Theory and Best Practices* (pp. 125-140). USA: Elsevier Inc.
- Econex. (2013). *The South African Private Healthcare sector: Role and contribution to the economy*. Retrieved on July 22, 2015, from

<http://www.mm3admin.co.za/documents/docmanager/f447b607-3c8f-4eb7-8da4-11bca747079f/00060290.pdf>

- Field, A. (2005). *Discovering statistics using SPSS* (2nd ed.). Thousand Oaks, CA: Sage.
- Forthofer, M. S., Markman, H. J., Cox, M., Stanley, S., & Kessler, R. C. (1996). Associations between marital distress and work loss in a national sample. *Journal of Marriage and the Family*, 58, 597-605.
- Fournier, D. G., Olson, D. H., & Druckman, J. M. (1983). Assessing marital and premarital relationships: The PREPARE-ENRICH Inventories. In E. E. Filsinger (Ed.), *Marriage and family assessment* (pp. 229-250). Beverly Hills, CA: Sage Publishing.
- Fowers, B. J., & Olsen, D. H. (1989). ENRICH Marital Inventory: A discriminant validity and cross-validity assessment. *Journal of Marital and Family Therapy*, 15(1), 65-79.
- Fowers, B. J., & Olson, D. H. (1993). ENRICH Marital Satisfaction Scale: A brief research and clinical tool. *Journal of Family Psychology*, 7(2), 176-185.
- Francis, V. (n.d.). Supportive organisational cultures and their effect on male civil engineers. *The Australian Journal of Construction Economics and Building*, 4(1), 1-9.
- Freeny, Y. M., & Tiernan, J. (2009). Exploration of the facilitators of and barriers to work engagement in nursing. *International Journal of Nursing Studies*, 46(12), 1557-1565.
- Georgios, K., & Nikolaos, A. (2012). An investigation of a model of personal-situational factors, stress and burnout in track and field coaches. *Journal of Physical Education and Sport*, 12(3), 343-349.
- Geurts, S. A. E., Taris, T. W., Kompier, M. A. J., Dickers, J. S. E., Van Hooff, M. L. M., & Kinnunen, U. M. (2005). Work-home interaction from a work psychological perspective: Development and validation of a new questionnaire, the SWING. *Work & Stress*, 19(4), 319-339.

- Glocker, T. (2012). *Partial least squares path modeling: Introduction and application*. Retrieved June 17, 2015, from http://lipas.uwasa.fi/~tglo/documents/PLS_Path_Modeling.pdf
- Görgens-Ekermans, G., & Herbert, M. (2013). Psychological capital: Internal and external validity of Psychological Capital Questionnaire (PCQ-24) on a South African sample. *SA Journal of Industrial Psychology, 39*(2), 1-12.
- Greenblatt, E. (2002). Work/life balance: Wisdom or whining. *Organisational Dynamics, 31*(2), 177-193.
- Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *The Academy of Management Review, 10*(1), 76-88.
- Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003). The relationship between work-family balance and quality of life. *Journal of Vocational Behaviour, 63*, 510-531.
- Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review, 31*(1), 72-92.
- Gupta, V., & Singh, S. (2014). Psychological capital as mediator of the relationship between leadership and creative performance behaviors: empirical evidence from the Indian R&D sector. *The International Journal of Human Resource Management, 25*(10), 1373-1394.
- Hammer, L. B., Kossek, E. E., Yragui, N. L., Bodner, T. E., & Hanson, G. C. (2009). Development and validation of a multidimensional measure of Family Supportive Supervisor Behaviors (FSSB). *J Manage, 35*(4), 837-856.
- Hämmig, O., Brauchli, R., & Bauer, G. F. (2012). Effort-reward and work-life imbalance, general stress and burnout among employees of a large public hospital in Switzerland. *Swiss Medical Weekly, 142*, 1-11.
- Hanif, F., & Raza Naqvi, S. M. M. R. (2014). Analysis of work family conflict in view of nurses, in health sector of Pakistan. *International Journal of Gender and Women's Studies, 2*(4), 103-116.

- Harini, C. (2013). Through the years: Evolution of emotional labour as a construct and a measure. *International Journal of Social Science & Interdisciplinary Research*, 2(9), 121-130.
- Hawksley, B. (2007). Work-related stress, work/life balance and personal life coaching. *British Journal of Community Nursing*, 12(1), 34-36.
- Health Systems Trust. (n.d.). *SA faces nursing crises*. Retrieved July 28, 2015, from <http://www.hst.org.za/news/sa-faces-nursing-crisis>
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modelling in international marketing. *Advances in International Marketing*, 20, 277-319.
- Higgins, C. A., Duxbury, L. E., & Lyons, S. T. (2010). Coping with overload and stress: Men and women in dual-earners families. *Journal of Marriage and Family*, 72, 847-859.
- Hill, E. J., Jacob, J. I., Shannon, L. L., Brennan, R. T., Blanchard, V. L., & Martinengo, G. (2008). Exploring the relationship of workplace flexibility, gender, and life stage to family-to-work conflict, stress and burnout. *Community, Work & Family*, 11(2), 165-181.
- Hooja, H. R. (2012). *Psychological capital and transformational leadership in relation to work-life balance: A study on Police Personnel*. Unpublished doctor's thesis, The IIS University, Jaipur.
- HRM Guide. (n.d.). *Nurses suffer work-life conflict*. Retrieved July 28, 2015, from <http://www.hrmguide.com/worklife/nurses.htm>
- Jackson, L. T. B., & Rothmann, S. (2005). Work-related well-being of educators in a district of the North West Province. *Perspectives in Education*, 23, 107-122.
- Jahn, E. W., Thompson, C. A., & Kopelman, R. E. (2003). Rationale and construct validity evidence for a measure of perceived organizational family support (POFS): Because purported practices may not reflect reality. *Community, Work & Family*, 6(2), 123-140.

- Jennings, B. M. (2008). *Chapter 26 work stress and burnout among nurses: Role of the work environment and working conditions*. Retrieved July 28, 2015, from <http://www.ncbi.nlm.nih.gov/books/NBK2668/>
- Kaiser, J. (2014). Dealing with missing values in data. *Journal of systems integration*, 1, 42-51.
- Karimi, R., Omar, Z. B., Alipour, F., & Karimi, Z. (2014). The influence of role overload, role conflict and role ambiguity on occupational stress among nurses in selected Iranian hospitals. *International Journal of Asian Social Science*, 4(1), 34-40.
- Kemp, F. O. M. (2013). *New ways of working and organizational outcomes: The role of psychological capital*. Unpublished master's thesis, Vrije University, Amsterdam.
- Kerlinger, F. N., & Lee, H. B. (Eds.). (2000). *Foundations of behavioral research* (4th ed.). New York: Harcourt College Publishers.
- Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress*, 19(3), 192–207.
- Kossek, E. E., Lewis, S., & Hammer, L. B. (2010). Work–life initiatives and organizational change: Overcoming mixed messages to move from the margin to the mainstream. *Human Relations*, 63(1), 2-19.
- Kotzé, M., & Lamb, S. (2012). The influence of personality traits and resilience on burnout among customer service representatives in a call centre. *Journal of Social Sciences*, 32(3), 295-309.
- Kulik, L., & Rayyan, F. (2006). Relationships between dual-earners spouses, strategies for coping with home-work demands and emotional well-being. *Community, Work and Family*, 9(4), 457-477.
- Kwong-Kay Wong, K. (2013). Partial Least Squares Structural Equation Modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1-32.

- Lamb, S. (2009). *Personality traits and resilience as predictors of job stress and burnout among call centre employees*. Unpublished master's thesis, University of the Free State, Bloemfontein.
- Levert, T., Lucas, M., & Ortlepp, K. (2000). Burnout in psychiatric nurses: contributions of the work environment and a sense of coherence. *South African Journal of Psychology, 30*, 36–43.
- Lin, Y. (2013). The causes, consequences, and mediating effects of job burnout among hospital employees in Taiwan. *Journal of Hospital Administration, 2*(1), 15-27.
- Liu, L., Chang, Y., Fu, J., Wang, J., & Wang, L. (2012). The mediating role of psychological capital on the association between occupational stress and depression symptoms among Chinese physicians: a cross-sectional study. *BMC Public Health, 12*(219), 1-8.
- Loukidou, E., Loannidi, V., & Kalokerinou-Anagnostopoulou, A. (n.d.). *Nursing as emotional labour: A specialised pedagogical approach as the new challenge and innovation educational intervention for health promotion*. Retrieved on June 27, 2014, from <http://www.hphconferences.org/archive/creta09/htm/proceedings/P179-Loukidou.pdf>
- Lu, L., Kao, S., Chang, T., Wu, H., & Cooper, C. L. (2008). Work/family demands, work flexibility, work/family conflict, and their consequences at work: A national probability sample in Taiwan. *International Journal of Stress Management, 15*(1), 1-21.
- Luthans, B. C., Luthans, K. W., & Avey, J. B. (2013). Building the leaders of tomorrow: The development of academic psychological capital. *Journal of Leadership & Organisational Studies, 21*(2), 191-199.
- 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*, 387-393.

- Luthans, F. L., Avolio, B. J., & Avey, J. B. (2007). Psychological Capital (PsyCap) Questionnaire (PCQ). Mind Garden Catalogue.
- Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Psychological capital: Measurement and relationship with performance and job satisfaction. *PERSONNEL PSYCHOLOGY*, *60*, 541–572.
- 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., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital*. New York: Oxford University Press.
- Malan, S. (2008). *Women professionals in South Africa: The interaction between work life balance and organisational commitment*. Unpublished master's thesis, University of Pretoria, Pretoria.
- Manetje, O. M. (2009). *Chapter 2: Organisational culture*. Retrieved on June 27, 2014, from <http://uir.unisa.ac.za/bitstream/handle/10500/1133/03chapter2.pdf?sequence=2>.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, *52*, 397–422.
- Matias, M., & Fontaine, A. M. (2012). Can we have it all? The work-family coping profiles of dual-earners. *Family Science*, *3*(3), 255-265.
- Mesmer-Magnus, J. R., & Viswesvaran, C. (2005). Convergence between measures of work-to-family and family-to-work conflict: A meta-analytic examination. *Journal of Vocational Behavior*, *67*(2), 215-232.
- Mesmer-Magnus, J. R., & Viswesvaran, C. (2006). How family-friendly environments affect work-family conflict: A meta-analytical examination. *Journal of Labour Research*, *XXVII*(4), 555-574.
- Meyer, T. (2008). *Exploring the relationship between emotional intelligence, burnout and absenteeism of bus drivers in the scheduled public bus services industry*. Unpublished research report, Stellenbosch University, South Africa.

- Mitchelson, J. K. (2009). Seeking the perfect balance: Perfectionism and work-family conflict. *Journal of Occupational and Organisational Psychology*, 82, 349-367.
- Monecke, A., & Leisch, F. (2012). semPLS: Structural Equation Modeling Using Partial Least Squares. *Journal of Statistical Software*, 48(3), 1-32.
- Montgomery, A. J., Panagopolou, E., De Wildt, M., & Meenks, E. (2005). Work-family interference, emotional labour and burnout. *Journal of Managerial Psychology*, 21(1), 36-51.
- Mostert, K., & Oldfield, G. R. (2009). Work-home interaction of employees in the mining industry. *SAJEMS NS*, 12(1), 81-99.
- Nadeem, M. S., & Abbas, Q. (2009). The Impact of work life conflict on job satisfaction of employees in Pakistan. *International Journal of Business and Management*, 4(5), 63-83.
- Neal, M. B., & Hammer, L. B. (2009). Dual-earner couples in the sandwiched generation: Effects of coping strategies over time. *The Psychologist-Manager Journal*, 12(4), 205-234.
- Nguyen, T. D., & Nguyen, T. T. M. (2012). Psychological capital, quality of work life, and quality of life of marketers: Evidence from Vietnam. *Journal of Macromarketing*, 32(1), 87-95.
- Nunnally, J., & Bernstein, I. (1999). Psychometric theory. *Journal of Psychoeducational Assessment*, 226, 2557-280.
- O'Brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & Quantity*, 41, 673-690.
- Ojha, M. U. (2011). *Job demands, social support, and work-family conflict: a comparative study of immigrant and native workers in the United States*. Unpublished doctor's thesis, University of Kentucky, Lexington, Kentucky
- Ólafsdóttir, S. (2008). *The role of organisational culture in employees' work-life balance as an aspect of health*. Unpublished master's thesis, Nordic School of Public Health, Göteborg.

- Opie, T., & Henn, C. M. (2013). Work-family conflict and work engagement among mothers: Conscientiousness and neuroticism as moderators. *SA Journal of Industrial Psychology*, 39(1), 1-12.
- Pallant, J. (2007). *SPSS survival manual: A step-by-step guide to data analysis using SPSS for Windows (Version 15) (3rd ed.)*. Australia: Allen & Unwin.
- Peng, J., Jjang, X., Zhang, J., Xiao, R., Song, Y., Feng, X., Zhang, Y., & Miao, D. (2013). The Impact of psychological capital on job burnout of Chinese nurses: The mediator role of organizational commitment. *PLoS ONE*, 8(12), 1-7.
- Pennstate. (2015). *Detecting multicollinearity using variance inflation factors*. Retrieved September 26, 2016, from Pennstate Eberly College of Science, <https://onlinecourses.science.psu.edu/stat501/node/347>.
- Petermann, B. A., Springer, P., & Farnsworth, J. (1995). Analyzing job demands and coping techniques. *Nursing Management*, 26(2), 51-53.
- Pienaar, J., & Van Wyk, D. (2006). Teacher burnout: construct equivalence and the role of union membership. *South African Journal of Education*, 26(4), 541-551.
- Pieterse, M. (2004). *A psychometric analysis of the Survey Work-Home Interaction – Nijmegen (SWING) in the Southern African earthmoving equipment industry*. Unpublished master's thesis, North-West University, Potchefstroom.
- Pieterse, M., & Mostert, K. (2005). Measuring the work-home interface: Validation of the Survey Work-Home Interaction- Nijmegen (SWING) Instrument. *Management Dynamics*, 14(2), 2–15.
- Pineau Stam, L. M., Spence Laschinger, H. K., Regan, S., & Wong, C. A. (2015). The influence of personal and workplace resources on new graduate nurses' job satisfaction. *Journal of Nursing Management*, 23, 190-199.
- Pisarik, C. T. (2009). Motivational orientation and burnout among undergraduate students. *College Student Journal*, 43(4), 1238-1252.
- Potter, P., Deshields, T., Divanbeigi, J., Berger, J., Cipriano, D., Norris, L., & Olsen, S. (2010). Compassion fatigue and burnout: prevalence among oncology nurses. *Clinical Journal of Oncology Nursing*, 14(5), 56–62.

- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36(4), 717-731.
- Pugh, S., Groth, M., & Hennig-Thurau, T. (2011). Willing and able to fake emotions: A closer examination of the link between emotional dissonance and employee well-being. *Journal of Applied Psychology*, 96(2), 377-390.
- Raisinghani, M., & Goswami, R. (2014). Model of work life balance explaining relationships constructs. *International Journal of Application or Innovation in Engineering & Management*, 3(2), 46-59.
- Ram, N., Khoso, I., Shah, A. A., Chandio, F. R., & Shaikih, F. M. (2011). Role conflict and role ambiguity as factors in work stress among managers: A case study of manufacturing sector in Pakistan. *Asian Social Science*, 7(2), 113-118.
- Rantanen, J., Kinnunen, J., Mauno, S., & Tilleman, K. (2011). *Chapter 2. Introduction theoretical approaches to work-life balance and testing a new typology among professionals*. Retrieved on January 27, 2015, from file:///C:/Users/UVP/Downloads/9783642161988-c1.pdf.
- Rantanen, J., Kinnunen, U., Feldt, T., & Pulkkinen, L. (2008). Work-family conflict and psychological well-being: Stability and cross-lagged relations within one- and six-year follow ups. *Journal of Vocational Behavior*, 73, 37-51.
- Roelen, C., Van Rhenen, W., Schaufeli, W., Van der Klink, J., Mageroy, N., Moen, B., Bjorvatn, B., & Pallesen, S. (2013). Mental and physical health-related functioning mediates between psychological job demands and sickness absence among nurses. *Journal of Advance Nursing*, 70(8), 1780-1792.
- Rothmann, S., & Essenko, N. (2007). Job characteristics, optimism, burnout, and ill health of support staff in higher education institution in South Africa. *South African Journal of Psychology*, 37(1), 135-152.
- Rothmann, S., & Joubert, J. H. M. (2007). Job demands, job resources, burnout and work engagement of managers at a platinum mine in the North West province. *S.Afr.J.Bus.Manage*, 38(3), 49-61.

- Rothmann, S., Mostert, K., & Strydom, M. (2006). A psychometric evaluation of the job demands-resources scale in South Africa. *SA Journal of Industrial Psychology*, 32(4), 76-86.
- Roux, S. (2014). *The impact of positive organisational factors on the career success of black employees in the South African work environment: An exploratory study*. Unpublished doctor's thesis, University of Stellenbosch, Stellenbosch.
- Royal, M. (2013). *Rising work-life balance concerns tied to employee turnover across the globe*. Retrieved on April 18, 2014, from <http://www.haygroup.com/ww/press/details.aspx?id=36865>
- Russel, C. J., & Bobko, P. (1992). Moderated regression analysis and Likert scales: Too coarse for comfort. *Journal of Applied Psychology*, 77(3), 336-342.
- SA nursing council, *growth in the registers*. (n.d.). Retrieved July 28, 2015, from http://www.sanc.co.za/stats/stat_ts/Growth/Growth%202005-2014.pdf
- Sahibzada, K., Hammer, L. B., Neal, M. B., & Kuang, D. C. (2005). The moderating effects of work-family role combinations and work-family organizational culture on the relationship between family-friendly workplace supports and job satisfaction. *Journal of Family Issues*, 26(6), 820-839.
- Said, N. B. (2013). *Time management in nursing work*. Retrieved on October 9, 2016, from https://staff.najah.edu/sites/default/files/Time_Management_in_Nursing_Work-Nizar_Said.pdf
- Salkind, N. J. (2007). *Encyclopedia of measurement and statistics*. Thousand Oaks, CA: Sage.
- Schaay, N., Sanders, D., & Kruger, V. (2011). *Overview of the health sectors reform in South Africa*. Retrieved on July 22, 2015, from <http://www.sarrahsouthafrica.org/LinkClick.aspx?fileticket=XB382Sl2kmw%3D&t abid=2321>

- Schaufeli, W. B., Bakker, A. B., & Van Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. *Journal of Organisational Behavior*, 30, 893-917.
- Schaufeli, W. B., & Greenglass, E. R. (2001). Introduction to special issue on burnout and health. *Psychology and Health*, 16, 501-510.
- Schaufeli, W. B., & Salanova, M. (2011). Work engagement: On how to better catch a slippery concept. *European Journal of Work and Organizational Psychology*, 20(1), 39-46.
- Schmidt, K. H., & Diestel, S. (2012). Job demands and personal resources in their relations to indicators of job strain among nurses for older people. *Journal of Advanced Nursing*, 69(10), 2185–2195.
- Schmidt, S. (2011). Work-life conflict: Factors associated with negative spillover from home to work. *Journal of Undergraduate Research*, XIV, 1-14.
- Seligman, M. E. P. (2002). *Authentic happiness*. New York: Free Press.
- Shirom, A. (2003). Job-related burnout: A review. In J.C. Quick., & L.E. Tetrick (Eds.), *Handbook of occupational health psychology* (pp. 245-264). Washington, Dc: American Psychological Association.
- Shree, R. M. (2012). Worklife balance & marital satisfaction of critical care nurses in private hospitals at Coimbatore. *International Journal of Management and Social Sciences Research*, 1(2), 18-24.
- Siddiqui, M. N. (2013). Impact of work life conflict on employee performance. *Far East Journal of Psychology and Business*, 12(3), 26-40.
- Signs, symptoms, causes, and coping strategies*. (n.d.). Retrieved January 10, 2015, from http://www.helpguide.org/mental/burnout__signs__symptoms.htm.
- Simard, J. (n.d.). *Burnout- a modern day affliction*. Retrieved January 22, 2015, from http://www.pipsc.ca/portal/page/portal/website/news/magazine/summer06/BURNOUT%E2%80%93a%20modern%20day%20affliction?_template=website/t_printerfriendly.

- Simon, M. K., & Goes, J. (2013). *Ex post facto research*. Retrieved Julie 25, 2015, from <http://www.dissertationrecipes.com/ex-post-facto-research/>
- Simons, J. C., & Buitendach, J. H. (2013). Psychological capital, work engagement and organisational commitment amongst call centre employees in South Africa. *SA Journal of Industrial Psychology, 39*(2), 1-12.
- Siu, O. L. (2013). Psychological capital, work well-being, and work-life balance among Chinese employees. *Journal of Personnel Psychology, 12*(4), 170-181.
- Soltani, I., Hajatpour, S., Khorram, J., & Nejati, M. H. (2013). Investigating the effect of role conflict and role ambiguity on employees' job stress: Articulating the role of work-family conflict. *Management Science Letters, 3*, 1927-1936.
- Soni, P. (2013). The struggle to juggle: Work-life balance at a private company in Durban, South Africa. *Journal of Management & Administration, 11*(1), 34-56.
- Spence Laschinger, H. K., & Fida, R. (2014). New nurses burnout and workplace wellbeing: The influence of authentic leadership and psychological capital. *Burnout Research, 1*, 19-28.
- Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological bulletin, 124*(2), 240-261.
- Stangor, C. (2011). *Research methods for the behavioral sciences* (4th ed.). Belmont, USA: Wadsworth Cengage Learning.
- Stock, R. M., Bauer, E. M., & Bieling, G. I. (2013). How do top executives handle their work and family life? A taxonomy of top executives' work-family balance. *The International Journal of Human Resource Management, 25*(13), 1-26.
- Stoeber, J., & Rennert, D. (2008). Perfectionism in school teachers: Relations with stress appraisal, coping styles, and burnout. *Anxiety, Stress, & Coping, 21*(1), 27-53.
- Sweet, J. A. (n.d.). *Changes in the life cycle composition of the United States population and the demand for housing*. Retrieved on September 15, 2015, from <http://www.ssc.wisc.edu/cde/cdewp/89-14.pdf>

- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics*. Upper Saddle River, NJ: Pearson.
- Ten Brummelhuis, L. L., Oosterwaal, A., & Bakker, A. B. (2012). Managing family demands in teams: The role of social support at work. *Group & Organization Management, 37*(3), 376-403.
- Ten Brummelhuis, L. L., & Van der Lippe, T. (2010). Effective work-life balance support for various household structures. *Human Resource Management, 49*(2), 173-193.
- Ten Brummelhuis, L. L., Van der Lippe, T., Kluwer, E. S., & Flap, H. (2008). Positive and negative effects of family involvement on work-related burnout. *Journal of Vocational Behavior, 73*, 387-396.
- Teo, S. T. T., Roche, M., Pick, D., & Newton, C. J. (2014). *Psychological capital as moderator of organizational change demands on nursing stress*. Retrieved on July 22, 2015, from <http://eprints.qut.edu.au/75998/3/75998.pdf>
- Theron, C. C. (2014). Intermediate statistics and computer usage power point slides. Class notes. Stellenbosch University.
- Theron, D. (2005). Beating burnout: The stress menace. *Management Today, 21*(8), 56-58.
- Toppinen-Tanner, S. (2011). *Process of burnout: structure, antecedents, and consequences*. Retrieved March 15, 2015, from <https://helda.helsinki.fi/bitstream/handle/10138/26491/processo.pdf?sequence=1>
- Underhill, E. (2005). Winners or losers? Work/life balance and temporary agency workers. *Labour & Industry: a journal of the social and economic relations of work, 16*(2), 29-59.
- Van der Colff J. J. (2001). *The nursing lecturer as a facilitator of motivation of the nursing student*. Unpublished master's thesis, Potchefstroom University for CHE, Potchefstroom.
- Van der Colff, J. J., & Rothmann, S. (2014). Burnout of registered nurses in South Africa. *Journal of Nursing Management, 22*, 630-642.

- 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.
- Van der Heijden, I. J. M., Demerouti, E., Bakker, A. B., & Hasselhorn, H. (2008). Work-home interference among nurses: reciprocal relationships with job demands and health. *Journal of Advance Nursing*, 62(5), 572-584.
- Van der Poel, A. (2000). *Die invloed van kroonaarhartomleidingchirurgie op die huweliksverhouding en gesinsfunksionering van die pasiënt*. Unpublished master's thesis, University of Stellenbosch, Stellenbosch.
- Van Gelderen, B. R., Konijn, E. A., & Bakker, A. B. (2011). Emotional labor among trainee police officers: The interpersonal role of positive emotions. *The Journal of Positive Psychology*, 6(2), 163-172.
- Vazifehdost, H., & Rahmani, M. (2013). The relationships between teamwork, role ambiguity, supervisor-nurse, and well-being: Public against private sector nurse. *International Journal of Research in Social Science*, 3(4), 18-31.
- Vorkapić, S. T., & Mustapić, J. (2012). Internal and external factors in professional burnout of substance abuse counsellors in Croatia. *Ann Ist Super Sanità*, 48(2), 189-197.
- Voydanoff, P. (2004). Implications of work and community demands and resources for work-to-family conflict and facilitation. *Journal of Occupational Health Psychology*, 9(4), 275-285.
- Voydanoff, P. (2005). The differential salience of family and community demands and resources for family-to-work conflict and facilitation. *Journal of Family and Economics Issues*, 26(3), 395-417.
- Voydanoff, P. (2005). Towards a conceptualisation of perceived work-family fit and balance: A demands and resources approach. *Journal of Marriage and Family*, 67(4), 822-836.

- Wang, Y., Chang, Y., Fu, J., & Wang, L. (2012). Work-family conflict and burnout among Chinese female nurses: the mediating effect of psychological capital. *BMC Public Health*, *12*, 1-8.
- Wang, Y., Liu, L., Wang, J., & Wang, L. (2012). Work-family conflict and burnout among Chinese doctors: The mediating role of psychological capital. *Journal of Occupational Health*, *54*, 232-240.
- Warren, J. A., & Johnson, P. J. (1995). The impact of workplace support on work-family role strain. *Family Relations*, *44*(2), 163-169.
- Weiten, W. (2010). *Psychology themes & variations* (8th ed.). Belmont, USA: Watsworth Cengage learning.
- Wiese, L., Rothmann, S., & Storm, K. (2003). Coping, stress, and burnout in the South African police service in KwaZulu-Natal. *SA Journal of Industrial Psychology*, *29*(4), 71-80.
- Wirtz, A., Nachreiner, F., & Rolfes, K. (2011). Working on Sunday-effects on safety, health, and work-life balance. *Chronobiology International*, *28*(4), 361-370.
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demand-resource model. *International Journal of Stress Management*, *14*(2), 121-141.
- Yardley, K. (2012). *Psychological capital as a positive resource to assist with the organisational outcomes of work family conflict*. Unpublished master's thesis, Massey University, Albany New Zealand.
- Yildirim, D., & Aycan, Z. (2008). Nurses' work demands and work-family conflict: A questionnaire survey. *International Journal of Nursing Studies*, *45*(9), 1-12.
- Youssef, C. M., & Luthans, F. (2007). Positive organisational behaviour in the workplace. The impact of hope, optimism, and resilience. *Journal of Management*, *33*(5), 774-800.

Appendix 1

	variable 1	variable 2	Pearson	Pearson p-val	Spearman	Spearman p-val	# cases
1	WLC-NWHI	WLC-NHWI	0.57	<0.01	0.53	<0.01	106
2	WLC-NWHI	JDR-Role overload	0.55	<0.01	0.55	<0.01	106
3	WLC-NWHI	JDR-Organisational support	-0.22	0.03	-0.25	0.01	106
4	WLC-NWHI	Burnout-Personal Burnout	0.59	<0.01	0.62	<0.01	106
5	WLC-NWHI	Burnout-Work Burnout	0.61	<0.01	0.63	<0.01	106
6	WLC-NWHI	Burnout-Patient Burnout	0.45	<0.01	0.48	<0.01	106
7	WLC-NWHI	PC-Self-efficacy	-0.19	0.05	-0.14	0.14	106
8	WLC-NWHI	PC-Hope	-0.38	<0.01	-0.37	<0.01	106
9	WLC-NWHI	PC-Resilience	-0.27	<0.01	-0.23	0.02	106
10	WLC-NWHI	PC-Optimism	-0.42	<0.01	-0.40	<0.01	106
11	WLC-NWHI	EL-Frequency	0.03	0.77	0.08	0.41	106
12	WLC-NWHI	EL-Intensity	0.17	0.08	0.19	0.05	106
13	WLC-NWHI	EL-Variety	0.14	0.14	0.16	0.11	106
14	WLC-NWHI	EL-Deep acting	-0.02	0.81	-0.02	0.85	106
15	WLC-NWHI	EL-Surface acting	0.33	<0.01	0.33	<0.01	106
16	WLC-NWHI	MRS	-0.36	<0.01	-0.34	<0.01	106
17	WLC-NWHI	WL CUL	0.31	<0.01	0.29	<0.01	106
18	WLC-NHWI	JDR-Role overload	0.44	<0.01	0.34	<0.01	106
19	WLC-NHWI	JDR-Organisational support	-0.24	0.01	-0.24	0.01	106
20	WLC-NHWI	Burnout-Personal Burnout	0.45	<0.01	0.44	<0.01	106
21	WLC-NHWI	Burnout-Work Burnout	0.50	<0.01	0.51	<0.01	106
22	WLC-NHWI	Burnout-Patient Burnout	0.47	<0.01	0.51	<0.01	106
23	WLC-NHWI	PC-Self-efficacy	-0.33	<0.01	-0.26	<0.01	106
24	WLC-NHWI	PC-Hope	-0.50	<0.01	-0.41	<0.01	106
25	WLC-NHWI	PC-Resilience	-0.40	<0.01	-0.40	<0.01	106
26	WLC-NHWI	PC-Optimism	-0.49	<0.01	-0.46	<0.01	106
27	WLC-NHWI	EL-Frequency	0.06	0.51	0.11	0.26	106
28	WLC-NHWI	EL-Intensity	0.30	<0.01	0.26	<0.01	106
29	WLC-NHWI	EL-Variety	0.28	<0.01	0.28	<0.01	106
30	WLC-NHWI	EL-Deep acting	0.06	0.56	0.06	0.56	106
31	WLC-NHWI	EL-Surface acting	0.47	<0.01	0.53	<0.01	106
32	WLC-NHWI	MRS	-0.41	<0.01	-0.44	<0.01	106
33	WLC-NHWI	WL CUL	0.23	0.02	0.18	0.06	106
34	JDR-Role overload	JDR-Organisational support	-0.27	<0.01	-0.24	0.01	106

35	JDR-Role overload	Burnout-Personal Burnout	0.62	<0.01	0.62	<0.01	106
36	JDR-Role overload	Burnout-Work Burnout	0.62	<0.01	0.62	<0.01	106
37	JDR-Role overload	Burnout-Patient Burnout	0.49	<0.01	0.45	<0.01	106
38	JDR-Role overload	PC-Self-efficacy	-0.08	0.40	-0.05	0.63	106
39	JDR-Role overload	PC-Hope	-0.25	<0.01	-0.22	0.02	106
40	JDR-Role overload	PC-Resilience	0.05	0.64	0.09	0.38	106
41	JDR-Role overload	PC-Optimism	-0.21	0.03	-0.20	0.04	106
42	JDR-Role overload	EL-Frequency	0.22	0.02	0.20	0.04	106
43	JDR-Role overload	EL-Intensity	0.19	0.05	0.23	0.02	106
44	JDR-Role overload	EL-Variety	0.23	0.02	0.21	0.03	106
45	JDR-Role overload	EL-Deep acting	0.11	0.24	0.11	0.25	106
46	JDR-Role overload	EL-Surface acting	0.40	<0.01	0.36	<0.01	106
47	JDR-Role overload	MRS	-0.31	<0.01	-0.26	<0.01	106
48	JDR-Role overload	WL CUL	0.28	<0.01	0.25	<0.01	106
49	JDR-Organisational support	Burnout-Personal Burnout	-0.38	<0.01	-0.42	<0.01	106
50	JDR-Organisational support	Burnout-Work Burnout	-0.39	<0.01	-0.38	<0.01	106
51	JDR-Organisational support	Burnout-Patient Burnout	-0.38	<0.01	-0.39	<0.01	106
52	JDR-Organisational support	PC-Self-efficacy	0.21	0.03	0.18	0.06	106
53	JDR-Organisational support	PC-Hope	0.34	<0.01	0.34	<0.01	106
54	JDR-Organisational support	PC-Resilience	0.23	0.02	0.21	0.03	106
55	JDR-Organisational support	PC-Optimism	0.33	<0.01	0.31	<0.01	106
56	JDR-Organisational support	EL-Frequency	-0.02	0.81	-0.02	0.87	106
57	JDR-Organisational support	EL-Intensity	-0.05	0.60	-0.04	0.66	106
58	JDR-Organisational support	EL-Variety	-0.06	0.53	-0.03	0.79	106

59	JDR- Organisational support	EL-Deep acting	-0.02	0.84	0.03	0.76	106
60	JDR- Organisational support	EL-Surface acting	-0.32	<0.01	-0.32	<0.01	106
61	JDR- Organisational support	MRS	0.12	0.21	0.03	0.76	106
62	JDR- Organisational support	WL CUL	-0.52	<0.01	-0.45	<0.01	106
63	Burnout-Personal Burnout	Burnout-Work Burnout	0.85	<0.01	0.84	<0.01	106
64	Burnout-Personal Burnout	Burnout-Patient Burnout	0.59	<0.01	0.59	<0.01	106
65	Burnout-Personal Burnout	PC-Self-efficacy	-0.28	<0.01	-0.25	<0.01	106
66	Burnout-Personal Burnout	PC-Hope	-0.44	<0.01	-0.46	<0.01	106
67	Burnout-Personal Burnout	PC-Resilience	-0.14	0.17	-0.13	0.19	106
68	Burnout-Personal Burnout	PC-Optimism	-0.47	<0.01	-0.49	<0.01	106
69	Burnout-Personal Burnout	EL-Frequency	0.19	0.05	0.20	0.04	106
70	Burnout-Personal Burnout	EL-Intensity	0.15	0.11	0.18	0.07	106
71	Burnout-Personal Burnout	EL-Variety	0.17	0.07	0.18	0.07	106
72	Burnout-Personal Burnout	EL-Deep acting	0.09	0.37	0.09	0.35	106
73	Burnout-Personal Burnout	EL-Surface acting	0.50	<0.01	0.48	<0.01	106
74	Burnout-Personal Burnout	MRS	-0.26	<0.01	-0.19	0.05	106
75	Burnout-Personal Burnout	WL CUL	0.23	0.02	0.21	0.03	106
76	Burnout-Work Burnout	Burnout-Patient Burnout	0.75	<0.01	0.75	<0.01	106
77	Burnout-Work Burnout	PC-Self-efficacy	-0.21	0.03	-0.22	0.03	106
78	Burnout-Work Burnout	PC-Hope	-0.42	<0.01	-0.42	<0.01	106
79	Burnout-Work Burnout	PC-Resilience	-0.10	0.31	-0.08	0.42	106
80	Burnout-Work Burnout	PC-Optimism	-0.46	<0.01	-0.47	<0.01	106
81	Burnout-Work Burnout	EL-Frequency	0.18	0.07	0.21	0.03	106
82	Burnout-Work Burnout	EL-Intensity	0.12	0.23	0.15	0.11	106
83	Burnout-Work Burnout	EL-Variety	0.17	0.08	0.17	0.09	106
84	Burnout-Work Burnout	EL-Deep acting	0.02	0.82	0.05	0.58	106
85	Burnout-Work Burnout	EL-Surface acting	0.51	<0.01	0.46	<0.01	106
86	Burnout-Work Burnout	MRS	-0.27	<0.01	-0.21	0.03	106

87	Burnout-Work Burnout	WL CUL	0.30	<0.01	0.27	<0.01	106
88	Burnout-Patient Burnout	PC-Self-efficacy	-0.10	0.29	-0.11	0.25	106
89	Burnout-Patient Burnout	PC-Hope	-0.39	<0.01	-0.38	<0.01	106
90	Burnout-Patient Burnout	PC-Resilience	-0.14	0.17	-0.13	0.17	106
91	Burnout-Patient Burnout	PC-Optimism	-0.42	<0.01	-0.43	<0.01	106
92	Burnout-Patient Burnout	EL-Frequency	0.12	0.24	0.13	0.19	106
93	Burnout-Patient Burnout	EL-Intensity	0.13	0.19	0.16	0.09	106
94	Burnout-Patient Burnout	EL-Variety	0.16	0.11	0.16	0.09	106
95	Burnout-Patient Burnout	EL-Deep acting	0.03	0.77	0.00	0.96	106
96	Burnout-Patient Burnout	EL-Surface acting	0.49	<0.01	0.47	<0.01	106
97	Burnout-Patient Burnout	MRS	-0.25	0.01	-0.17	0.08	106
98	Burnout-Patient Burnout	WL CUL	0.25	0.01	0.20	0.04	106
99	PC-Self-efficacy	PC-Hope	0.54	<0.01	0.53	<0.01	106
100	PC-Self-efficacy	PC-Resilience	0.25	<0.01	0.24	0.01	106
101	PC-Self-efficacy	PC-Optimism	0.42	<0.01	0.41	<0.01	106
102	PC-Self-efficacy	EL-Frequency	0.11	0.26	0.12	0.24	106
103	PC-Self-efficacy	EL-Intensity	0.05	0.62	0.06	0.55	106
104	PC-Self-efficacy	EL-Variety	-0.01	0.91	0.01	0.88	106
105	PC-Self-efficacy	EL-Deep acting	0.16	0.10	0.14	0.14	106
106	PC-Self-efficacy	EL-Surface acting	-0.20	0.04	-0.14	0.14	106
107	PC-Self-efficacy	MRS	0.06	0.52	0.06	0.57	106
108	PC-Self-efficacy	WL CUL	-0.17	0.09	-0.13	0.19	106
109	PC-Hope	PC-Resilience	0.49	<0.01	0.45	<0.01	106
110	PC-Hope	PC-Optimism	0.60	<0.01	0.58	<0.01	106
111	PC-Hope	EL-Frequency	0.07	0.50	0.02	0.83	106
112	PC-Hope	EL-Intensity	-0.17	0.08	-0.16	0.10	106
113	PC-Hope	EL-Variety	-0.18	0.07	-0.17	0.09	106
114	PC-Hope	EL-Deep acting	0.01	0.94	0.00	0.99	106
115	PC-Hope	EL-Surface acting	-0.38	<0.01	-0.37	<0.01	106
116	PC-Hope	MRS	0.22	0.03	0.21	0.03	106
117	PC-Hope	WL CUL	-0.29	<0.01	-0.22	0.03	106
118	PC-Resilience	PC-Optimism	0.52	<0.01	0.50	<0.01	106
119	PC-Resilience	EL-Frequency	0.27	<0.01	0.25	<0.01	106
120	PC-Resilience	EL-Intensity	-0.15	0.12	-0.13	0.19	106
121	PC-Resilience	EL-Variety	0.01	0.94	0.02	0.85	106
122	PC-Resilience	EL-Deep acting	0.18	0.07	0.24	0.01	106
123	PC-Resilience	EL-Surface acting	-0.15	0.14	-0.13	0.20	106
124	PC-Resilience	MRS	0.03	0.73	0.06	0.54	106

125	PC-Resilience	WL CUL	-0.25	0.01	-0.13	0.17	106
126	PC-Optimism	EL-Frequency	0.14	0.14	0.11	0.28	106
127	PC-Optimism	EL-Intensity	-0.15	0.13	-0.16	0.11	106
128	PC-Optimism	EL-Variety	-0.20	0.04	-0.20	0.04	106
129	PC-Optimism	EL-Deep acting	-0.04	0.67	-0.02	0.80	106
130	PC-Optimism	EL-Surface acting	-0.37	<0.01	-0.35	<0.01	106
131	PC-Optimism	MRS	0.31	<0.01	0.30	<0.01	106
132	PC-Optimism	WL CUL	-0.35	<0.01	-0.27	<0.01	106
133	EL-Frequency	EL-Intensity	0.31	<0.01	0.29	<0.01	106
134	EL-Frequency	EL-Variety	0.31	<0.01	0.32	<0.01	106
135	EL-Frequency	EL-Deep acting	0.50	<0.01	0.50	<0.01	106
136	EL-Frequency	EL-Surface acting	0.27	<0.01	0.28	<0.01	106
137	EL-Frequency	MRS	0.01	0.91	0.03	0.76	106
138	EL-Frequency	WL CUL	-0.14	0.17	-0.10	0.33	106
139	EL-Intensity	EL-Variety	0.70	<0.01	0.70	<0.01	106
140	EL-Intensity	EL-Deep acting	0.47	<0.01	0.43	<0.01	106
141	EL-Intensity	EL-Surface acting	0.23	0.02	0.27	<0.01	106
142	EL-Intensity	MRS	-0.07	0.45	-0.07	0.50	106
143	EL-Intensity	WL CUL	0.06	0.51	0.03	0.76	106
144	EL-Variety	EL-Deep acting	0.55	<0.01	0.55	<0.01	106
145	EL-Variety	EL-Surface acting	0.35	<0.01	0.37	<0.01	106
146	EL-Variety	MRS	-0.15	0.14	-0.14	0.14	106
147	EL-Variety	WL CUL	0.08	0.42	0.06	0.54	106
148	EL-Deep acting	EL-Surface acting	0.25	<0.01	0.24	0.01	106
149	EL-Deep acting	MRS	-0.03	0.77	-0.02	0.83	106
150	EL-Deep acting	WL CUL	-0.09	0.37	-0.10	0.32	106
151	EL-Surface acting	MRS	-0.29	<0.01	-0.26	<0.01	106
152	EL-Surface acting	WL CUL	0.16	0.11	0.16	0.11	106
153	MRS	WL CUL	-0.20	0.04	-0.20	0.04	106

WLC-NWHI = Work-life conflict (Negative work to home interference); WLC-NHWI = Work-life conflict (Negative home to work interference); JDR = Job demands-resources; PC = Psychological Capital; EL = Emotional labour; WL CUL = Work-life culture; MRS = Marital satisfaction

Appendix 2

Path	Original Sample	2.5% confidence interval (lower)	97.5% confidence interval (upper)	Discriminate
CGR MAR_SAT moderator -> BURNOUT	0.034	0.03	0.279	yes
CGR PSYCAP moderator -> BURNOUT	0.176	0.039	0.356	yes
CGR PSYCAP moderator -> CGR MAR_SAT moderator	0.316	0.078	0.63	yes
CGR WL_CUL moderator -> BURNOUT	0.089	0.033	0.289	yes
CGR WL_CUL moderator -> CGR MAR_SAT moderator	0.434	0.063	0.597	yes
CGR WL_CUL moderator -> CGR PSYCAP moderator	0.24	0.02	0.564	yes
EL -> BURNOUT	0.377	0.257	0.586	yes
EL -> CGR MAR_SAT moderator	0.072	0.055	0.337	yes
EL -> CGR PSYCAP moderator	0.215	0.103	0.43	yes
EL -> CGR WL_CUL moderator	0.086	0.065	0.294	yes
EL ORG_SUP moderator -> BURNOUT	0.132	0.033	0.295	yes
EL ORG_SUP moderator -> CGR MAR_SAT moderator	0.205	0.008	0.366	yes
EL ORG_SUP moderator -> CGR PSYCAP moderator	0.162	0.008	0.447	yes
EL ORG_SUP moderator -> CGR WL_CUL moderator	0.229	0.015	0.43	yes
EL ORG_SUP moderator -> EL	0.053	0.051	0.345	yes
EL PSYCAP moderator -> BURNOUT	0.149	0.037	0.307	yes
EL PSYCAP moderator -> CGR MAR_SAT moderator	0.109	0.004	0.253	yes
EL PSYCAP moderator -> CGR PSYCAP moderator	0.145	0.011	0.57	yes
EL PSYCAP moderator -> CGR WL_CUL moderator	0.149	0.008	0.374	yes
EL PSYCAP moderator -> EL	0.306	0.107	0.534	yes
EL PSYCAP moderator -> EL ORG_SUP moderator	0.363	0.138	0.624	yes
MAR SAT -> BURNOUT	0.35	0.213	0.522	yes
MAR SAT -> CGR MAR_SAT moderator	0.143	0.069	0.373	yes
MAR SAT -> CGR PSYCAP moderator	0.139	0.074	0.324	yes
MAR SAT -> CGR WL_CUL moderator	0.08	0.059	0.248	yes
MAR SAT -> EL	0.229	0.203	0.429	yes
MAR SAT -> EL ORG_SUP moderator	0.116	0.08	0.288	yes
MAR SAT -> EL PSYCAP moderator	0.08	0.074	0.267	yes
ORG SUP -> BURNOUT	0.466	0.271	0.65	yes
ORG SUP -> CGR MAR_SAT moderator	0.147	0.092	0.376	yes
ORG SUP -> CGR PSYCAP moderator	0.13	0.066	0.357	yes
ORG SUP -> CGR WL_CUL moderator	0.183	0.102	0.399	yes
ORG SUP -> EL	0.268	0.23	0.421	yes
ORG SUP -> EL ORG_SUP moderator	0.249	0.123	0.417	yes
ORG SUP -> EL PSYCAP moderator	0.19	0.093	0.4	yes

ORG SUP -> MAR SAT	0.209	0.19	0.38	yes
PSYCAP -> BURNOUT	0.507	0.343	0.68	yes
PSYCAP -> CGR MAR_SAT moderator	0.155	0.054	0.336	yes
PSYCAP -> CGR PSYCAP moderator	0.203	0.074	0.531	yes
PSYCAP -> CGR WL_CUL moderator	0.06	0.046	0.288	yes
PSYCAP -> EL	0.346	0.295	0.534	yes
PSYCAP -> EL ORG_SUP moderator	0.204	0.074	0.411	yes
PSYCAP -> EL PSYCAP moderator	0.364	0.113	0.598	yes
PSYCAP -> MAR SAT	0.305	0.244	0.528	yes
PSYCAP -> ORG SUP	0.429	0.272	0.623	yes
RO -> BURNOUT	0.711	0.606	0.804	yes
RO -> CGR MAR_SAT moderator	0.116	0.057	0.293	yes
RO -> CGR PSYCAP moderator	0.089	0.056	0.279	yes
RO -> CGR WL_CUL moderator	0.094	0.065	0.326	yes
RO -> EL	0.399	0.28	0.624	yes
RO -> EL ORG_SUP moderator	0.151	0.072	0.355	yes
RO -> EL PSYCAP moderator	0.182	0.081	0.375	yes
RO -> MAR SAT	0.356	0.234	0.565	yes
RO -> ORG SUP	0.312	0.212	0.504	yes
RO -> PSYCAP	0.264	0.192	0.452	yes
RO ORG_SUP moderator -> BURNOUT	0.088	0.024	0.3	yes
RO ORG_SUP moderator -> CGR MAR_SAT moderator	0.027	0.005	0.268	yes
RO ORG_SUP moderator -> CGR PSYCAP moderator	0.159	0.009	0.372	yes
RO ORG_SUP moderator -> CGR WL_CUL moderator	0.141	0.01	0.382	yes
RO ORG_SUP moderator -> EL	0.195	0.062	0.387	yes
RO ORG_SUP moderator -> EL ORG_SUP moderator	0.512	0.328	0.697	yes
RO ORG_SUP moderator -> EL PSYCAP moderator	0.216	0.034	0.456	yes
RO ORG_SUP moderator -> MAR SAT	0.228	0.104	0.454	yes
RO ORG_SUP moderator -> ORG SUP	0.295	0.108	0.498	yes
RO ORG_SUP moderator -> PSYCAP	0.1	0.056	0.398	yes
RO ORG_SUP moderator -> RO	0.101	0.061	0.305	yes
RO PSYCAP moderator -> BURNOUT	0.08	0.019	0.285	yes
RO PSYCAP moderator -> CGR MAR_SAT moderator	0.019	0.003	0.252	yes
RO PSYCAP moderator -> CGR PSYCAP moderator	0.051	0.01	0.445	yes
RO PSYCAP moderator -> CGR WL_CUL moderator	0.017	0.007	0.434	yes
RO PSYCAP moderator -> EL	0.255	0.12	0.461	yes
RO PSYCAP moderator -> EL ORG_SUP moderator	0.268	0.069	0.483	yes
RO PSYCAP moderator -> EL PSYCAP moderator	0.368	0.131	0.664	yes
RO PSYCAP moderator -> MAR SAT	0.111	0.072	0.346	yes
RO PSYCAP moderator -> ORG SUP	0.131	0.084	0.371	yes
RO PSYCAP moderator -> PSYCAP	0.281	0.074	0.502	yes

RO PSYCAP moderator -> RO	0.087	0.066	0.319	yes
RO PSYCAP moderator -> RO ORG_SUP moderator	0.458	0.077	0.742	yes
WL CUL -> BURNOUT	0.324	0.175	0.523	yes
WL CUL -> CGR MAR_SAT moderator	0.093	0.065	0.274	yes
WL CUL -> CGR PSYCAP moderator	0.067	0.061	0.322	yes
WL CUL -> CGR WL_CUL moderator	0.105	0.055	0.345	yes
WL CUL -> EL	0.22	0.198	0.409	yes
WL CUL -> EL ORG_SUP moderator	0.158	0.073	0.371	yes
WL CUL -> EL PSYCAP moderator	0.185	0.081	0.448	yes
WL CUL -> MAR SAT	0.259	0.192	0.471	yes
WL CUL -> ORG SUP	0.602	0.447	0.76	yes
WL CUL -> PSYCAP	0.419	0.253	0.645	yes
WL CUL -> RO	0.321	0.211	0.514	yes
WL CUL -> RO ORG_SUP moderator	0.149	0.099	0.35	yes
WL CUL -> RO PSYCAP moderator	0.182	0.079	0.41	yes
WLC -> BURNOUT	0.794	0.661	0.936	yes
WLC -> CGR MAR_SAT moderator	0.202	0.036	0.333	yes
WLC -> CGR PSYCAP moderator	0.082	0.019	0.304	yes
WLC -> CGR WL_CUL moderator	0.174	0.059	0.469	yes
WLC -> EL	0.395	0.28	0.643	yes
WLC -> EL ORG_SUP moderator	0.135	0.036	0.348	yes
WLC -> EL PSYCAP moderator	0.219	0.09	0.414	yes
WLC -> MAR SAT	0.558	0.428	0.729	yes
WLC -> ORG SUP	0.316	0.152	0.587	yes
WLC -> PSYCAP	0.719	0.564	0.895	yes
WLC -> RO	0.702	0.552	0.858	yes
WLC -> RO ORG_SUP moderator	0.161	0.035	0.484	yes
WLC -> RO PSYCAP moderator	0.339	0.105	0.553	yes
WLC -> WL CUL	0.385	0.17	0.642	yes
WLC ORG_SUP moderator -> BURNOUT	0.024	0.019	0.291	yes
WLC ORG_SUP moderator -> CGR MAR_SAT moderator	0.104	0.005	0.353	yes
WLC ORG_SUP moderator -> CGR PSYCAP moderator	0.074	0.006	0.375	yes
WLC ORG_SUP moderator -> CGR WL_CUL moderator	0.047	0.004	0.402	yes
WLC ORG_SUP moderator -> EL	0.132	0.056	0.306	yes
WLC ORG_SUP moderator -> EL ORG_SUP moderator	0.482	0.297	0.679	yes
WLC ORG_SUP moderator -> EL PSYCAP moderator	0.211	0.028	0.474	yes
WLC ORG_SUP moderator -> MAR SAT	0.128	0.088	0.346	yes
WLC ORG_SUP moderator -> ORG SUP	0.257	0.101	0.471	yes
WLC ORG_SUP moderator -> PSYCAP	0.127	0.066	0.455	yes
WLC ORG_SUP moderator -> RO	0.135	0.052	0.388	yes
WLC ORG_SUP moderator -> RO ORG_SUP moderator	0.714	0.468	0.847	yes
WLC ORG_SUP moderator -> RO PSYCAP moderator	0.283	0.015	0.667	yes

WLC ORG_SUP moderator -> WL CUL	0.151	0.074	0.472	yes
WLC ORG_SUP moderator -> WLC	0.006	0.022	0.472	yes
WLC PSYCAP moderator -> BURNOUT	0.184	0.029	0.371	yes
WLC PSYCAP moderator -> CGR MAR_SAT moderator	0.051	0.004	0.297	yes
WLC PSYCAP moderator -> CGR PSYCAP moderator	0.251	0.02	0.527	yes
WLC PSYCAP moderator -> CGR WL_CUL moderator	0.005	0.006	0.455	yes
WLC PSYCAP moderator -> EL	0.205	0.104	0.4	yes
WLC PSYCAP moderator -> EL ORG_SUP moderator	0.193	0.013	0.437	yes
WLC PSYCAP moderator -> EL PSYCAP moderator	0.39	0.182	0.657	yes
WLC PSYCAP moderator -> MAR SAT	0.133	0.079	0.342	yes
WLC PSYCAP moderator -> ORG SUP	0.155	0.086	0.449	yes
WLC PSYCAP moderator -> PSYCAP	0.377	0.109	0.59	yes
WLC PSYCAP moderator -> RO	0.299	0.12	0.468	yes
WLC PSYCAP moderator -> RO ORG_SUP moderator	0.212	0.015	0.611	yes
WLC PSYCAP moderator -> RO PSYCAP moderator	0.653	0.348	0.808	yes
WLC PSYCAP moderator -> WL CUL	0.307	0.122	0.499	yes
WLC PSYCAP moderator -> WLC	0.457	0.209	0.674	yes
WLC PSYCAP moderator -> WLC ORG_SUP moderator	0.289	0.017	0.759	yes

CGR = Care giving responsibilities; MAR SAT= Marital satisfaction; PSYCAP = Psychological capital; WL_CUL = Work-life culture; EL = Emotional Labour; ORG_SUP = Organisational support; RO = Role overload; WLC = Work-life conflict

Appendix 3

Paths	BURNOUT	WLC
BURNOUT		
CGR	1.148	1.354
CGR MAR_SAT moderator		1.498
CGR PSYCAP moderator		1.239
CGR WL_CUL moderator		1.498
EL	1.385	1.512
EL ORG_SUP moderator		1.748
EL PSYCAP moderator		1.464
MAR SAT		1.436
ORG SUP	1.308	1.846
PSYCAP	1.706	1.531
RO	1.797	1.504
RO ORG_SUP moderator		2.026
RO PSYCAP moderator		1.558
WL CUL		1.765
WLC	2.553	
WLC ORG_SUP moderator	1.202	
WLC PSYCAP moderator	1.344	
WLC= Work-life conflict; CGR= Care giving responsibilities; MAR_SAT= Marital satisfaction; PSYCAP= Psychological capital; WL_CUL= Work-life culture; EL= Emotional labour; ORG_SUP= Organisational support; RO= Role overload		