AN INTEGRATED MODEL OF THE IMPACT OF INDIVIDUAL CULTURAL VALUES AND THE MEDIATING EFFECT OF JOB SATISFACTION, ORGANISATIONAL COMMITMENT AND PERCEIVED SUPPORT ON TURNOVER INTENTION

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KEYWORDS

Turnover

Turnover intention

Hofstede cultural value dimensions

Collectivism

Uncertainty avoidance

Power distance

Masculinity

Long-term orientation

Job satisfaction

Organisational commitment

Perceived organisational support

Perceived supervisory support

DECLARATION

I declare that *An Integrated Model of the Impact of Individual Cultural Values and the Mediating Effect of Job Satisfaction, Organisational Commitment and Perceived Support on Turnover Intention* is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Oscar Sandile Mthembu March 2017

Signed: . . . . . .

ABSTRACT

Employee turnover presents a number of negative organisational outcomes, such as loss of human capital, skills, organisational memory and investment on employee training and development. Theory and empirical research have shown that the most immediate predecessor of employee turnover behaviour is turnover intention, or intention to quit. It is envisaged in this study that attracting and selecting employees who possess individual cultural value dimensions that are aligned with those of the organisation could impact positively on employee intention to stay in the organisation. The effect of job-related attitudes (*i.e.* employee job satisfaction and organisational commitment) on turnover intention has been established in a number of empirical studies. It is hypothesised in this study that Hofstede's cultural value dimensions of collectivism, power distance, uncertainty avoidance, masculinity and long-term orientation at individual level can help explain and predict job satisfaction and organisational commitment. In turn, job satisfaction and organisational commitment will decrease employees' intention to leave an organisation.

The primary objective of the present study was to integrate Hofstede's cultural value dimensions at individual level, job satisfaction, organisational commitment, perceived organisational support (POS) and perceived supervisory support (PSS), and to describe the manner in which these latent variables combine to affect turnover intention. The study was conducted in a public sector department that experiences a relatively high level of skilled employee turnover. The measuring instrument that was used to collect data was a survey questionnaire made up of Price and Muller's (1986) Measure of Intention to Quit, Warr-Cook & Wall's (1979) Job Satisfaction Scale, Mowday, Steers and Porter's (1979) Organisational Commitment Questionnaire (OCQ), Yoo, Donthu, Lernawitcz's (1991) and Cultural Value Scale (CVSCALE), a short-version, 8-item measure of POS that was developed by Dawley, Houghton and Buckley (2010) from the original 36-item POS measure of Eisenberger, Huntington, Hutchinson and Sowa (1986) and a ten-item measure of PSS that was adopted from Anderson, Coffey and Byerly (2002). Reliability and dimensionality analyses were computed by means of SPSS, Version 23. Confirmatory factor analysis was conducted for all the measures of the study. Structural equation modelling (SEM) was used to fit the structural and measurement models to data through LISREL 8.8.

The sample consisted of 325 military healthcare practitioners recruited through convenience sampling. These military health practitioners ranged from the lowest military rank to the rank of Colonel. The study employed quantitative research design, and survey as a research strategy. The sample was predominantly made up of military healthcare practitioners employed in three major military hospitals in South Africa respectively, viz., 1 Military Hospital in Tshwane, Gauteng Province, 2 Military Hospital in Cape Town, Western Cape Province, and 3 Military Hospital in Bloemfontein, Free State Province respectively. Additional sampling was performed at Saldanha Bay Military Sickbay, and Military Health Formation Training in Tshwane.

The employee retention structural model was tested via SEM after performing item and dimensional analyses as well as confirmatory factor analyses. Item and dimensional analyses were performed to identify poor items and ensure uni-dimensionality of measures. Uni-dimensionality is a requirement for item parcel creation. Item parcels were used due to sample size restrictions. Significant relationships were found between: Collectivism and Job Satisfaction; Collectivism and Organisational Commitment; Collectivism and Perceived supervisory support; Collectivism and Perceived organisational support; Job Satisfaction and Organisational Commitment; Organisational Commitment and Turnover Intention; Job Satisfaction and Turnover Intention; Perceived Supervisory Support and Job Satisfaction; Perceived Supervisory Support and Organisational commitment; Perceived Organisational Support and Job Satisfaction; Perceived Supervisory Support and Perceived Organisational Support; Perceived Organisational Support and Job Satisfaction; Perceived Organisational Support and Organisational Commitment; Perceived Organisational Support and Turnover Intention.

The following mediation effects were found: Job satisfaction mediated the effect of Collectivism on Turnover Intention; Organisational Commitment mediated the effect of Collectivism on Turnover Intention; Organisational Commitment mediated the effect of Job Satisfaction on Turnover Intention; Job Satisfaction mediated the effect of Perceived Supervisory Support of Turnover Intention; Organisational Commitment mediated the effect of Perceived Organisational Support on Turnover Intention; and Job Satisfaction mediated the effect of Perceived Organisational Support on Turnover Intention.

Support was not found for the relationships between: Collectivism and Perceived Organisational Support; Collectivism and Turnover Intention; Power Distance and Turnover Intention; Uncertainty Avoidance and Turnover Intention; Masculinity and Turnover Intention; Long-term Orientation and Turnover Intention; Perceived Supervisory Support and Organisational Commitment; Perceived Supervisory Support and Turnover Intention. The mediating effect of Perceived Organisational Support on the relationship between Perceived Supervisory Support and Turnover Intention and the mediating effect of Perceived Supervisory Support on the relationship between Collectivism and Turnover Intention were not supported. The fit of both the measurement and the structural models were tested via SEM. The fit of measurement model can generally be regarded as good. Also, the refined structural model was tested via SEM and can also be generally regarded as good. The statistical power of the model and the discriminant validity of the item parcels were ascertained. Limitations and suggestion for future studies were highlighted. The results of the present study provide important insights for human resources practitioners on how to identify potential health military practitioners that are likely to have lower turnover intention. The results of the present study provide important insights for managers on how to retain healthcare employees in military health institutions in South Africa.

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CHAPTER 1

INTRODUCTION, BACKGROUND AND OBJECTIVES OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND OF THE STUDY

Organisations could be viewed as people-created workplaces that bring together human abilities, capabilities, skills, toolkits and other competencies for the purpose of producing goods and/or providing services for consumption by members of the society. Through those products and services, humans create opportunities of satisfying some of their needs. The primary organisational goals of producing goods and providing services are intrinsically linked with the secondary goals of improving the quality of human life and the generation of wealth. Amongst a number of other resources, human capital is at the centre for sustaining organisational survival, ensuring organisational performance and productivity (Armstrong, 2006). Reference to human capital/resources as the most valuable asset of organisations has been made extensively (for example, Bassi & McMurrer, 2005; Fulmer & Ployhart, 2013; Gabčanová, 2011; Kossivi & Kalgora, 2016).

One of the challenges facing organisations in today's highly competitive labour and market environments is retaining and keeping human capital and competencies amidst the current high rate of employee turnover. Employee turnover brings with it a number of negative organisational outcomes, such as loss of human skill, loss of organisational memory, loss of investment in employee training and development, and can disrupt production of goods and provision of services, erode competitive advantage, interfere with the creation of wealth, profit maximisation, productivity and negatively impact on organisational effectiveness (Armstrong, 2006). It is one of the roles of industrial and organisational (I/O) psychologists to understand the dynamics of human behaviour in organisations so that they can offer prescriptions of dealing with the problems associated with negative work outcomes, such as high employee turnover.

Constanza, Alperowitz, Daly, Farley, Franco, Jackson, Kubiszewski and Schor (2012) define human capital as the productive capabilities of humans and their attributes, including their abilities, knowledge and physical and mental health that have been acquired at some cost to company. These productive capabilities and attributes command a price in the labour market

because they are useful in the production process. This definition suggests that human capital is acquired at a cost and represents a conscious investment aimed at adding value to the organisation. Transferability implies that human capital can migrate from one organisation to another. Armstrong (2006) argues that transferability of human capital from one organisation to the other also results in loss of investment. Such migration is likely to have adverse impact on organisational effectiveness because human capital is closely associated with organisational performance (Delaney & Huselid, 1996; Katou & Budhwar, 2007), realisation of strategic organisational goals (Huselid, Jackson & Schuler, 1996) and organisational effectiveness (Josan, 2013). Hence, human capital/resource could be regarded as a costly investment that needs to be retained by organisations because of its transferability. This is more the case with high performing employees because these are the human capital that an organisation can utilise best to maximise its capacity to compete effectively and gain a competitive advantage over competition. Hence, a need for effective employee retention strategies that could minimise employee emigration or migration for different or competing organisations should be quite obvious.

While Samuel and Chipunza (2009) argue that the challenge to retain skilled and high performing employees is a worldwide managerial phenomenon, Greyling and Stanz (2010) argue that the South African nursing profession experience an even greater challenge as health practitioners emigrate South Africa in numbers because they are attracted by lucrative salaries in developed countries. Employee migration is most evident in developing countries, such as South Africa, where employees are moved to leave their organisations by promises of gainful rewards and/or better employment opportunities in organisations abroad, either financial or in terms of other benefits. Delobelle, Rawlinon, Ntuli, Malatsi, Decock and Depoorter (2011) attribute labour migration of health practitioners from developing countries, like South Africa, to developed countries to standards of living, improved work conditions, nurse staffing ratios and/or improved career prospects. Most South African organisations and institutions are indeed faced with the challenge of converting an employee turnover challenge into an employee retention opportunity.

There are, however, reasons for employee turnover which are not materialistic or economic, but rather psychological. For example, change in employee perceptions, including their perception of the meaning of work, implies that employees are no longer unconditionally loyal

to a single employer but leave employment for better opportunities in other organisations (Matsumoto & Juang, 2017). Brain drain, war for talent and low to conditional employee loyalty require organisations to expend more energy and effort towards retaining their investments in human capital. Whether highly skilled employees are leaving for local organisations or for organisations abroad, and whatever their motivation for doing so, the consequences are the same. Therefore, a need for understanding the dynamics that play a role in the psychological processes of turnover intention should shed some light on the consequential, and often disruptive behaviour of employee turnover.

According to Mokonyane (2012), talent attraction and skills retention are crucial in sustaining service delivery in the South African civil society. This is very important considering the social instability and unrest that are currently characterising the South African society as a result of grievances associated with lack of, or poor service delivery. Lack of social delivery and the resulting social disorders have been attributed to public organisations' inability to retain skilled employees (Department of Public Service and Administration (DPSA, 2007). Retaining talented human capital could contribute immensely towards solving some of the problems associated with lack of service delivery. Mokonyane (2012, p.1) reiterates that

> even though extensive work has been done at the national level to identify occupational categories most affected by labour shortages and introducing initiatives to attract and retain staff in these areas, departments are not doing enough to introduce targeted interventions.

The persistence of skills shortages, a direct consequence of organisations' and departments' failure to retain scarce and essential skills, has continued to constrain government's delivery programmes, according to Mokonyane (2012).

The vastness of monetary loss associated with labour emigration is evident when Tshilongamulenzhe (2012) maintains that emigration of skilled professionals, so-called "brain drain" costs South African government about R69 billions of investment in human capital in 1997 alone. The problem of turnover in South African organisations is compounded by the "brain drain" phenomenon, which heightened competition nationally for talent and skills. Rasool and Botha (2011) define brain drain as the emigration of skilled professions out of the country. Dodani and LaPorte (1998, p. 487) define brain drain as:

> "the migration of health personnel in search of the better standard of living and quality of life, higher salaries, access to advanced technology and more stable political conditions in different places worldwide".

This definition indicates that brain drain is strongly associated with personnel migration from one organisation to another in the healthcare sector more than in other employment sectors. This definition also indicates that brain drain can have many precedents, but of importance in this study is the lack of loyalty and the effects of Hofstede's (1980) cultural value dimensions at individual level as well as job satisfaction, organisational commitment, perceived organisational and supervisory support.

As previously explicated, the primary objective of the field of applied behavioural science of I/O psychology is to build a body of knowledge about humans in the work context and apply it in order to enable practitioners to understand human behaviour when it happens, explain why it happens and even predict it before it happens (Matsumoto & Juang, 2017). In the world of work, IO psychology has the objective of understanding, explaining and predicting employee behaviour in order to solve problems in the world of work (Muchinsky, Kriek & Schreuder, 1998). Employee behaviour of quitting their jobs and organisations, which is generally referred to as employee turnover, is one amongst numerous organisational problems which IO psychologists have the purpose of understanding, and of dealing with through providing fitting prescriptions and interventions.

Employee turnover could be disruptive and could hinder an organisation's pursuit of maximising productivity, profit and wealth creation. A transfer of human capital and organisational skills occurs when employees leave an organisation for competition; especially through involuntary employee turnover. When employees leave out of their own volition it results in erosion of human capital which could have a negative impact on an organisation's capacity for achieving goals, including productivity (Armstrong, 2006).

Human resources practitioners, managers, theorists and researchers have associated employee turnover with different costs that could be accrued by organisations as a result of it. For example, Ongori (2007) viewed turnover from an investment perspective and related it to loss of investment in orientation, training, development, employee maintenance and retaining of human capital and talent. Morrell, Loan-Clarke and Wilkinson (2004) reckon that turnover is

associated with replacement, recruitment, selection, sourcing of temporal staff as well as learning and product/service quality costs that could be compromised as new employees are learning the job skills. Also, employee turnover has been associated with separation, administrative, severance pay, training costs (Tziner & Birati, 1996), lost organisational performance and productivity, time, loss of the knowledge, loss of the customers (Duda & Žůrková, 2013) and transition costs (Lashley, 2001). In fact, Ongori (2007) argues that employee turnover is a process that managers need to avoid at all costs because it represents an emigration of human capital investment and talent from the organisation.

The consequences of turnover for training-intensive organisations could be dire and severe (Jehanzeb & Bashir, 2013). The growing need for increasing the retention capabilities of valuable employees not only for growth, prosperity, profitability and organisational effectiveness but also for organisational survival in the current highly competitive and globalised, unpredictable world of work is quite obvious.

1.2 JUSTIFICATION FOR STUDYING TURNOVER INTENTION

Ajzen and Fishbein's (1975) theory of reasoned action (TRA) postulates that behaviour intention is the best predictor of an individual's behaviour. In other words, TRA presupposes that the immediate antecedent or predecessor of human behaviour is the intention to cause that particular behaviour. According to this theory, attitude towards a particular behaviour together with the subjective feelings about that behaviour combine to determine the intention to cause the behaviour. Applied to employee quitting behaviour, it is expected that the actual quitting behaviour is preceded by turnover intention. Literature and empirical research (Mobley, Griffeth, Hand & Meglino, 1979; Shore & Martin, 1989; Winterton, 2004) agree that intention to stay is the best predictor of staying in an organisation while intention to quit is the best predictor of the quitting behaviour.

Some studies on employee turnover have utilised turnover intention as the primary antecedent of turnover behaviour (e.g. Lambert, Hogan, & Barton, 2001) while some have used turnover intention as an outcome variable in itself (e.g. Feldman, Sapienza, & Kane, 1990; Lum, Kervin, Clark, Reid, & Sirola, 1998). Mustapha, Amhad, Uli and Idris (2011) define turnover intention as an idea or thinking about leaving a job or an organisation. Mustapha *et al*. (2011) suggested that studying turnover intentions rather than the actual quitting behaviour is the best approach of dealing with the turnover problem, since understanding the antecedents of turnover

cognitions may help devise the interventions for addressing them before the actual turnover behaviour commences. Studying turnover behaviour may be a little too late for appropriate interventions. As presented in the preceding section, turnover could be disruptive and could be associated with varied costs at many levels for an organisation.

1.3 AN OVERVIEW OF PREVIOUS MODELS OF TURNOVER INTENTION

Existing research on turnover intention has focused on job-related attitudes such as job satisfaction and organisational commitment (e.g. MacIntosh & Doherty, 2010; Mobley et al., 1979). Some studies have focused on organisational variables (e.g. Mobley et al. 1979), economic factors (e.g. Martin, 1979), and biographical variables (e.g. Winterton, 2001). Morrell *et al.* (2004, p. 97) state that "there is no standard account for why people choose to leave an organisation". There are numerous factors that may contribute to employee turnover.

Mobley (1977) developed a heuristic/interlinkages model of employee turnover decision making process that consists of seven cognitive steps. The model conceptualises employee turnover as a linear but heuristic process that is initiated by job dissatisfaction and culminates in the actual quitting or staying behaviour, which in turn is immediately preceded by turnover intentions. The model is heuristic because some steps may be overlooked in the turnover decision making process. Mobley (1977) demonstrated that cognitive processes consisting of evaluations, thoughts, searches and additional intentions complement the job satisfaction-turnover behaviour pathway. The model has been criticised because it consists of numerous cognitive constructs, of which some may be redundant, unnecessary and may not add value to understanding employee turnover decision making (Winterton, 2007). Also, the model fails to recognise the role of factors like cultural value dimensions, organisational commitment and perceived organisational and supervisory support in the turnover process (Sheridan, 1992). Moreover, the linear postulation of employee turnover process has been questioned because in real life humans can think along diverse patterns, resulting in different patterns of behaviour (Lee & Mitchell, 1994). The same weaknesses and gaps characterise the other studies (with their associated models) that validated Mobley's (1977) heuristic model (e.g. Hom & Griffeth, 1991; Hom, Griffeth & Sellaro, 1984; Mobley, Horner & Hollingsworth, 1978; Mowday, Koberg & McArthur, 1982; Sager, Griffeth & Hom, 1998); redundant cognitive constructs and the controversy surrounding the linear nature of the turnover process. Furthermore, the model does not lend itself for use during employee recruitment and selection to identify potential

candidates with a better person-organisation (PO) fit in terms of their cultural value, who would thus pose minimal turnover risk.

Mobley, Griffeth, Hand and Meglino's (1979) retention model depicts turnover intention as determined by numerous variables and sub-variables, including ten organisational variables, eleven individual variables, six labour market variables and an additional nine other variables depicted as individual values, expectations, satisfactions, intentions, behaviours, and so forth. In fact, this framework consists of more than forty variables in all. The model of Steel (1992) is equally complex, consisting of numerous factors that impact on employee turnover. Both models depict personal characteristics as the initial drivers of employee turnover process. However, Mobley *et al*. (1979) emphasise the role of satisfaction, while Steel (2002) highlights the effect of both job satisfaction and organisational commitment in the employee turnover process. Lee and Mitchell (1994) have argued that no single study could capture the entire complexity of Mobley *et al*.'s (1979) model. The same problem is equally applicable to Steel's (2002) turnover model. The two models are too complicated for empirical validation with a single study. In addition, although the two models incorporate individual and organisational factors, they fail to recognise the effect of an organisational global evaluative variable called the perceptions of organisational support in determining employee turnover as envisaged by the organisational support theory (OST) of Eisenberger and associates (Eisenberger, Huntington, Hutchinson & Sowa, 1986).

Lee and Mitchell (1994) developed an unfolding model of voluntary employee turnover that is grounded on decision-making, imagery and social psychology theories. The model postulates five alternative decision paths that could be followed by an employee in making a turnover decision. The paths of the model are constituted by a shocking or a jarring event that initiates the turnover decision making process, the engaged script or a plan, image violation, dissatisfaction, search/evaluation of alternatives and a likely job offer, or lack of it. Lee and Mitchell (1994) state that the choices made in each step determine the alternative paths amongst the five paths. The model omitted some very important variables that have been confirmed to be very important in turnover, e.g. organisational commitment (Martin, 1979; Michaels & Spector, 1982) and perceived organisational support (Eisenberger, Stinglhamber, Vandenberghe, Sucharski & Rhoades, 2002).

Martin's (1979) integrated and expanded contextual model of employee turnover intention comprised of some structural/process, environmental (opportunity) variables, some mediating (job satisfaction) and some biographical variables. There is lack of clarity regarding the inclusion of some variables in this model. There is no systematic and logical explanation of why the variables included in the model were selected and why others in the same category were left out (Mobley, *et al.*, 1979; Steel, 2002, Winterton, 2004). Similarly, the failure of recognising the importance of personal dispositions is a further weakness of this integrative and expanded model. Furthermore, the inability of the model to lend itself to usability for selection process, or its limited usability to identify appropriate personal dispositions that would positively impact or explain turnover intention is another weakness of this model. Lastly, the model omitted an important variable that has been identified by research and theory as having a very important effect on turnover intentions, *i.e.* organisational commitment.

Winterton's (2004) conceptual model of labour turnover and retention also recognises the actual quitting behaviour to be immediately and primarily determined by intention to quit, then low job satisfaction and low commitment, then labour market opportunities and ease of movement. The weaknesses of this model revolve around its overreliance on economic/labour market factors in determining turnover intention and, subsequently, the actual quitting behaviour and its perceived over-simplicity (Mobley, Griffeth, Hand & Meglino, 1979). Furthermore, this approach fails to identify individual variables that move some individuals to leave an organisation while others with the same economic conditions in place choose to stay (Steel, 2002).

MacIntosh and Doherty's (2010) model consists of job satisfaction and organisational culture as the primary antecedents of turnover intention, which is conceptualised as intention to quit. The model proposes that organisational culture determines job satisfaction, which in turn determines intention to quit. Such an approach demonstrates a need for establishing person-organisation fit in terms of organisational cultures and individual characteristics in order to increase employee retention. Nonetheless, this approach fails to link organisational culture and alignment with individual cultural values. This is a narrow view in the sense that it does not incorporate cultural value dimensions and/or personal dispositions of an individual that would result in a better PO fit, which could in turn be utilised during recruitment and selection exercises. Another weakness of MacIntosh and Doherty's (2010) model is its disregard of the important role of another job-related attitude that has been identified in literature and research

as an important variable in the process of intention to quit, *i.e.* organisational commitment (Winterton, 2004). Furthermore, this model has a narrow approach to the problem of turnover intention, focusing on only two variables, *i.e.* organisational culture and job satisfaction (Steel, 2002).

Culture is one of the most important constructs in the study of organisational behaviour (O'Reilly, Chatman & Caldwell, 1991). Culture has been found to have an impact on how well an individual fits in an organisation (O'Reilly *et al*., 1991), and it affects job satisfaction and organisational commitment (Lok & Crawford, 2003) and many other organisational variables, such as leadership style, creativity and management style (Matsumoto & Juang, 2017). One of the most recognised approaches used in cultural studies is Hofstede's (1980) cultural value framework. This framework identifies five cultural value dimensions that are used to differentiate cultures, namely Individualism-Collectivism, Uncertainty Avoidance, Power Distance, Femininity-Masculinity and Long-term Orientation (Matsumoto & Juang, 2017). Individualism-Collectivism refers to the extent to which a culture values personal assertiveness versus group cohesion; Uncertainty Avoidance refers to the extent to which a culture adopts ways of dealing with uncertainty and ambiguity; Power Distance refers to the extent to which cultures value status differences; Femininity-Masculinity refers to the extent to which cultures differentiate between sexes; Long-term Orientation refers to the extent to which cultures value long-term planning versus short-term orientation/planning (Hofstede, 2011). This current study has the aim of incorporating these cultural value dimensions at individual level. It aims to treat them as independent variables, and turnover intention as a dependent outcome variable in a model that also consists of job satisfaction, organisational commitment, perceived organisational support as well as perceived supervisory support in a single model.

1.4 DIFFERENTIATING THE CONCEPTUAL MODEL OF THIS STUDY FROM EXISTING MODELS

The model of this study incorporates Hofstede's cultural value dimensions at the individual level, conceptualised on the Hofstede's cultural value dimensions' framework (Prasongsukarn, 2009; Yoo, Donthu & Lenartowicz, 2011) at the individual level as the predictors of job satisfaction, organisational commitment and ultimately turnover intention. Literature has consistently established the effect of job satisfaction and organisational commitment as important predecessors of turnover intentions (Lee & Mitchell, 1996; Shore & Martin, 1989; Winterton, 2004). An additional variable deemed worthy of inclusion is perceived

organisational support, a global variable that is grounded on Eisenberger and associate's organisational support theory (Aselage & Eisenberger, 2003), which incorporates diverse aspects of employees' feelings regarding the way the organisation treats and values them. This construct is included in this study because it combines individual-level perceptions of different organisational level issues. Perceived supervisory support (PSS) introduces the social element of an organisation and was also deemed worthy of inclusion to represent the social element of an organisation. Perceived supervisory support has been found to be closely related to perceived organisational support (Eisenberger *et al*. 2002). The conceptual model will add value to the existing employee turnover retention theory by shedding light on the role of Hofstede's cultural values at individual level on employee turnover intention and retention.

1.5 RESEARCH GAP

Gaps in theory and research regarding turnover intentions have been identified. First, the models that incorporate personal dispositions like cultural value dimensions in the study of turnover intentions are very limited. Second, research on turnover intentions has over-emphasised personal job-related attitudes, *i.e.* job satisfaction and organisational commitment, while other studies have focused on organisational variables, economic factors and biographical variables (e.g. MacIntosh & Doherty, 2010; Mobley, *et al*., 1979). Third, models of turnover intentions evaluating the effect of personal dispositions of cultural values at individual level could not be established. Only models that included organisational culture (e.g. MacIntosh & Doherty, 2010) were identified. Furthermore, no models that intended to establish a fit between personal dispositions of Hofstede's cultural value dimensions at individual level, job satisfaction and organisational commitment, perceived organisational support and perceived supervisory support could be identified. On the basis of these observations, it was deemed desirable to include these variables in this research undertaking.

1.6 RESEARCH CONTEXT

High employee turnover among public servants is a global phenomenon. Allisey, Noblet, Lamontagne and Jonathan Houdmont (2014) recognise employee turnover in the public service, with a specific focus on protection service personnel of the United States of America. In South Africa, high employee turnover among public service health workers and the subsequent high vacancy rates have also been observed and recognised as a big cause for concern for timely and quality public health service delivery (Delobelle *et al*. 2011; Greyling & Stanz, 2010; Tshilongamulenzhe, 2012). The high need for increasing employee retention

in the South African public sector is evident in the publication of a manual entitled "Managing Staff Retention: An information guide for South African public service departments (Department of Public Service of South Africa, DPSA, 2007) reveals an unhealthy staff attrition status, and recommends strategies that include Occupation Specific Dispensation (OSD) in dealing with this employee turnover problem. In addition, the South African public service has adopted a financial compensation-based strategy called the OSD for the purpose of increasing retention of scarce-skills employees such as engineers, medical/health practitioners and marine (SA Navy) divers. Said OSD guarantees competitive salaries that match or are above the market-related norm. Pillay (2009, p. 52) defines the OSD as "the revised salary structure for specific occupations within the public sector aimed at aligning salaries to the market, with the aim of improving government's ability to attract and retain skilled employees".

Military healthcare practitioners have a major role to play in the success and readiness of national military operations, including border protection, peacekeeping missions and other constabulary projects the Department of Defence (DoD) and its operational wing, *i.e.* the South African National Defence Force (SANDF) engage in. It therefore becomes not only vital to employ suitable and competent candidates for respective jobs within the DoD, but also to ensure that those employed will remain loyal to the organisation and will manifest this by remaining with the organisation for a prolonged period of time. This research undertaking intends to investigate the role played by factors like job satisfaction, organisational commitment, perceptions of organisational support and supervisory support and more importantly, Hofstede's cultural values at individual level on turnover intentions among military healthcare practitioners in South Africa.

As a public organisation and a workplace, the military experiences the same challenge of employees voluntarily leaving the organisation and migrating to other organisations within our national borders for employment in public and private organisations, oftentimes in the private health sector, or emigrating for employment in organisations outside our national borders. According to the Department of Defence Annual Report (DoD, 2013), among the 3429 employment terminations in 2012/2013 financial year in the South African Military Health Service (SAMHS), a health unit of the DoD, 13.15% were voluntary resignations. Of those vacancies, 13.19% were medical professionals, with a general 1.91% vacancy rate in the combined South African Military Health Services. These statistics demonstrates that voluntary

resignations compound the existing problem of skills shortages in the DoD, especially in scarce skills occupations that are usually associated with high training investments and high demand.

Over and above the employee turnover costs highlighted above, labour migration of military health practitioners is likely to compromise the ability of the organisation to provide effective and efficient health service to its clients. More importantly, high employee turnover in the military not only compromises provision of healthcare service to the military personnel, but also the state of readiness of the organisation (military), as well as the defence capabilities of the country. According to the Department of Defence Annual Report (DoD, 2015) on service delivery output achievements of the South African Military Health Service (SAMHS), underachievement in combat readiness of the military health support elements for deployed and contingency forces was reported because of organisational failure to adequately staff some medical battalions. The report further indicates the existence of a shortage of healthcare practitioners, under-recruitment and low retention of healthcare practitioners for utilisation in the Reserve Medical Battalion Groups (DoD, 2015). On the basis of these observations, it is deemed worthy to conduct this empirical study in this public organisation (*i.e.* DoD) and its healthcare service provider division, SAMHS.

1.7 THE RESEARCH PROBLEM

This study sets out to investigate the effect of Hofstede's cultural values at individual level on turnover intention among health military practitioners in a South African military healthcare division, the SAMHS. The mediating effects of work-related attitudes and organisational support are also investigated. The research questions therefore are: What is the nature of the relationships among independent (cultural value dimensions at individual level conceptualised as Collectivism, Uncertainty avoidance, Power distance, Masculinity and Long-term orientation), mediation (Job satisfaction, Organisational commitment, Perceived supervisory support and Perceived organisational support) and dependent/outcome (Turnover intention) variables.

1.8 OBJECTIVES OF THE STUDY

In view of the arguments presented above, the proposed study will be guided by the following research objectives:

Primary objectives:

- To identify and evaluate relationships that exist between selected variables that are antecedent (predictors) to employees' turnover intention;
- To conceptualise these predictor variables within the framework of a structural model;
- To conduct an empirical study in order to establish the relationship between the selected antecedents of turnover intention and retention of military healthcare practitioners.

Secondary objectives:

- To review existing literature on selected antecedents of turnover intention in order to achieve the first primary objective;
- To validate the conceptualised structural model of the selected antecedents of intention to quit by using Structural Equation Modelling and other statistical analyses;
- To determine the nature of the hypothesised relationships depicted in Chapter 2;
- To make recommendations on the proposed employee turnover intention model involving cultural value dimensions at individual level, perceived organisational support, perceived supervisory support, job satisfaction, organisational commitment and turnover intention.

1.9 MOTIVATION AND SIGNIFICANCE OF THE STUDY

Employee turnover rate is a problem in both the South African public sector and private sector, but more acutely in the former. A full understanding and appreciating of the problem by managers and supervisors alike are required to effect accurate retention strategies. Currently, retention strategy tends to focus on limited factors such as competitive compensation through a strategy called occupational specific dispensation (OSD), which implies paying scarce skills employees, of which most public health practitioners form part. An integrated approach that considers all aspects of employee retention, inclusive of personal and organisational factors is

needed. This requires a deeper understanding of the factors related to turnover intentions and behaviour.

Hofstede's cultural values at individual level, organisational commitment, perceived organisational support and perceived supervisory support are the focus of the researcher's attention, the former being a relatively new aspect of organisational behaviour management. As expounded previously, the primary retention strategy adopted by the South African public service, including the Department of Defence and its military health service provider, the South African Military Health Service (SAMHS) is based on a favourable salary retainer, referred to as the OSD. This is meant to serve as a talent retainer and to ensure that the public sector compensates scarce skills employees competitively relative to the private sector in order to discourage employees from leaving for better remuneration packages in other organisations. This study aims at shedding light on the role of Hofstede's cultural value dimensions at individual level on job satisfaction, organisational commitment, perceived organisational and supervisory support and ultimately on turnover intentions, and the dynamics among these variables. The theoretical importance of this current study stems from its potential to illuminate on the dynamics amongst these variables and how they affect employee retention in the studied environment and inform managers about employee retention from a well-informed, integrated perspective that includes person-organisation fit (PO fit) in terms of individual and organisational values (O'Reilly *et al*., 1991).

The important role played by job satisfaction and organisational support on employee turnover intention and turnover behaviour is evident in the large number of studies that have included and provided evidence that these organisational behaviour-attitude variables play a pivotal role in employees' ultimate behaviour of leaving an organisation (Lee & Mitchell, 1994; Mobley, 1978; Winterton, 2004). It is therefore important to include these work-related attitudes in a study of turnover attitudes to attest the extent to which they play a role in the current military healthcare environment in particular.

Perceived organisational support and perceived supervisory support are very important human behaviour-organisational variables that have roots in Organisational Support Theory (OST) of Eisenberger and associates (2001). These variables, together with OST, explain how employees' feelings about what an organisation is doing to support and take care of them are extended or reciprocated by employees to the organisation in terms of extra effort, loyalty and

positive behaviours. Examining the extent to which these variables play a role in employee turnover intention should shed more light on the possibility of developing an integrated retention strategy in a military health context. This may highlight the need for adopting employee-supportive human resources practices.

Cultural values at the individual level is an understudied human behaviour concept in general, and its association with turnover and turnover intention, in particular, is equally overlooked. Moreover, relatively limited focus has been directed at examining the effect of Hofstede's cultural values at individual level together with job satisfaction, organisational commitment, perceptions of organisational support and supervisory support on turnover intention among South African military health practitioners. Moreover, the study will attempt to determine the mediating effect of job satisfaction, organisational support and perceptions of organisational support in the relationship between cultural values and turnover intention.

The motivation for this study derives from the need of military healthcare leaders and managers to have a clearer understanding of the dynamics around their subordinates' turnover intentions and the ultimate employee turnover behaviour. This would allow these leaders and managers to embark on effective strategies to protect their employees and retain their talent.

1.10 STRUCTURE OF THE DISSERTATION

The structure of this study undertaking in terms of chapter outline of this research is as follows:

Chapter 1

This introductory chapter clarified the background and justification of the study and a brief overview of previous models of turnover intentions was presented. The conceptual model of the study and a difference between this conceptual model and existing models was presented. Thereafter, the research gap, the initiating question, the research statement, research problem and the objectives of the study were presented. The motivation and significance of the study concluded this chapter.

Chapter 2

This chapter presented an in-depth explication of the theoretical argument through which the structural model was developed. This task was initiated by an examination of a review of

employee turnover and turnover intention. "Core" traditional theories as well as other contemporary theories and models were examined. Thereafter, the chapter provided an overview of the relationship amongst cultural value dimensions (at individual level), the two job-related attitudes of job satisfaction and organisational commitment, perceived organisational support, perceived supervisory support and turnover intentions. The turnover intentions retention model variables were presented and the model of this study was developed in this chapter.

Chapter 3

This chapter presented the substantial and statistical hypothesis of the current research followed by the research methodology that was implemented to test the model developed in chapter two. The turnover intentions retention model was schematically presented as a structural model, and mathematically as a matrix equation. The methodology section incorporated the research hypotheses, research design, sampling strategy, data collection procedures and measuring instruments. Thereafter data analysis approaches and techniques, including dealing with missing values, and the statistical analysis, including reliability analysis, exploratory factor analysis (EFA), Structural Equation Modelling (SEM) as well as regression analysis were presented.

Chapter 4

In this fourth chapter, results of data analysis inclusive of item analysis, dimensionality analysis through exploratory factor analysis (EFA), confirmatory factor analysis (CFA) of one multidimensional scale, *i.e.* CVSCALE, and structural model and measurement model fit assessment were presented. This led to decisions on the reliability, validity, power assessment and rejection or substantiation of the hypotheses of the study.

Chapter 5

In this fifth and last chapter, results that were presented in chapter four were discussed, and summaries were presented. Thereafter, implications of these results/findings for practice, theory and future research were presented. The chapter was concluded with the presentation of recommendations made from observations.

1.11 CHAPTER SUMMARY

In this chapter the background of the study, the justification of studying turnover intentions instead of the actual turnover behaviour, an overview of the previous models of employee turnover and differentiating the conceptual model of this study from existing models were all presented as background to the study. Furthermore, the research gap, the research statement, research problem, objectives, motivation and significance of the study were also examined. The need for developing a model that incorporates Hofstede's cultural value dimensions, job satisfaction, organisational commitment, perceived organisational support and perceived supervisory support and their impact on turnover intention were discussed. The structure of the subsequent chapters was thereafter drawn. The next chapter is the literature review.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

This chapter presents the theoretical conceptualisation that provided the background for the construction of causal relationships between selected constructs in the present study. These constructs are: 1) Hofstede's cultural value dimensions at individual level; 2) job satisfaction; 3); organisational commitment 4); perceived supervisory support 5); perceived organisational support; and 6) turnover intention. In this chapter, each of the eight selected constructs is discussed within the context of their definition and conceptual development. This is followed by a discussion of the relationships between the various constructs, which results in the formulation of a research proposition for each relationship. The conceptualised theoretical model of the study will be presented and explained, thus setting the stage for its empirical testing.

2.2 PREVIOUS TURNOVER INTENTION MODELS

The following section will explicate on a number of selected turnover and turnover intention models. First, Mobley's (1977) and Mobley, Griffeth, Hand and Meglino's (1979) "core models" and their validation studies are reviewed. Secondly, alternative models that also had a significant impact on turnover theory are expounded on. Thirdly, a selection of the contemporary models of employee turnover and retention in the South African context, including Delobelle *et al*. (2011), Greyling and Stanz (2010) will be examined.

2.2.1 Mobley's (1977) heuristic model of turnover

Mobley (1977) developed a heuristic employee turnover model that Steel (2012) refers to as one of the "core models" that focus on identifying the cognitive constructs that complement the job satisfaction–turnover pathway in the employee withdrawal decision process. The fundamental objective of this model was to identify additional variables that precede and are impacted by job satisfaction until actual job quitting behaviour is enacted. The model is regarded as heuristic because it is exploratory in nature and an individual does not have to incorporate all the illustrated steps (Mobley, 1977) illustrated in Figure 2.1. The model portrays employee turnover process as linearly occurring.

Figure 2.1. Mobley's (1977) heuristic employee turnover decision process model.

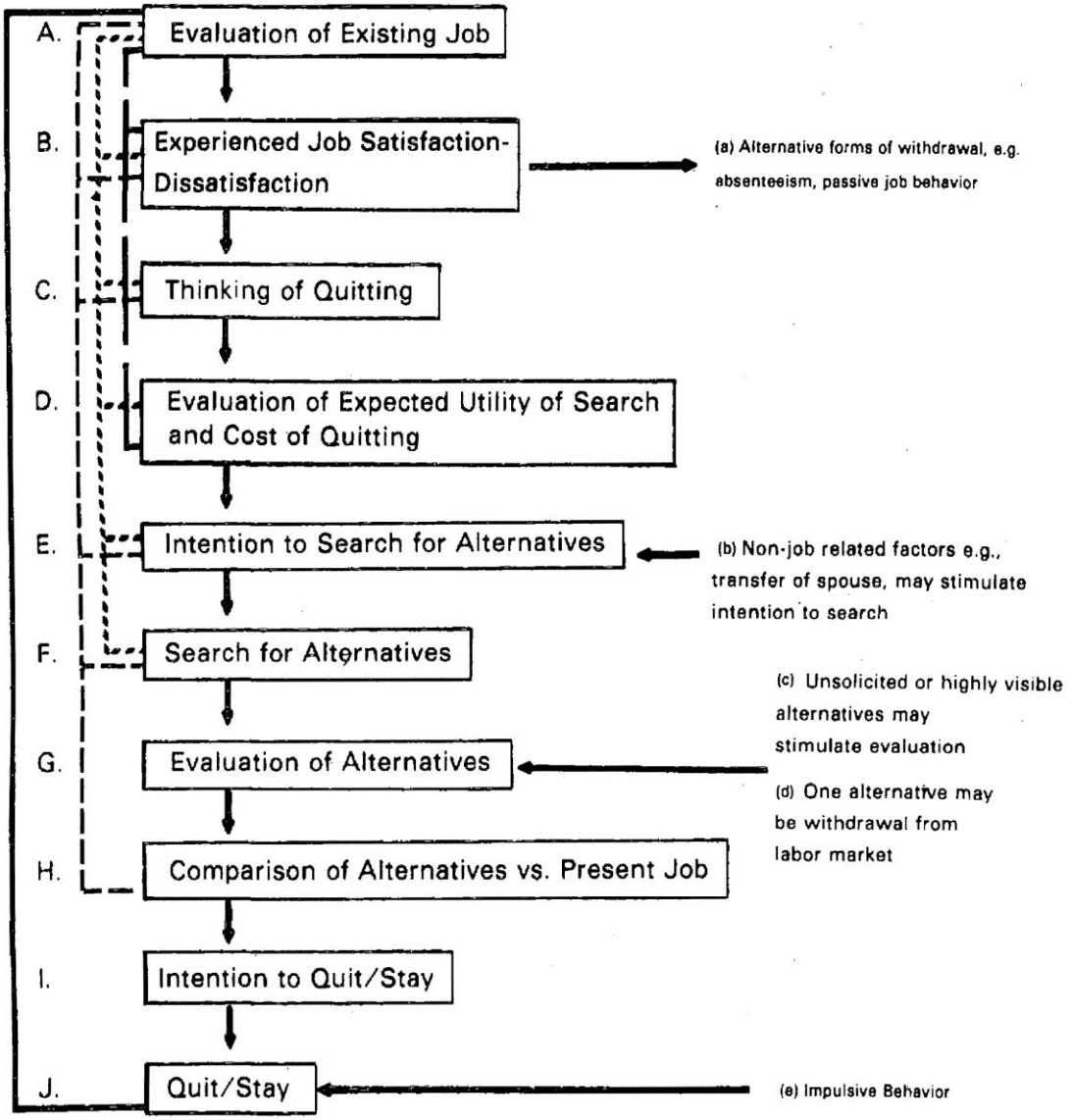


Figure 2.1 A linear employee turnover decision process model. Adapted from "Intermediate linkages in the relationship between job satisfaction and employee turnover" by W.H. Mobley, 1977. *Journal of Applied Psychology*. *62*(2), p. 238. Copyright 1977 by the American Psychological Association.

Mobley (1979) argued that the employee turnover decision process is initiated by an evaluation of the existing job. At this initial stage of the employee turnover decision process, an employee consciously and deliberately reviews personal benefits, positives and merits against the demerits and negative outcomes that are concomitant with their current jobs. Evaluation leads

to awareness of the personal feelings, perceptions and cognitions that an employee has regarding the current job. Mobley (1979) further suggested that evaluation of the job invokes feelings of satisfaction or dissatisfaction with one's job. Job satisfaction invokes thoughts of staying, while dissatisfaction invokes thoughts of quitting. Dissatisfaction, moreover, stimulates thoughts of evaluating the expected utility of searching for alternative jobs in terms of associated costs. If costs associated with searching for a new job are high and utility low, an employee may terminate the process at this juncture. But, if costs and utility are favourable, an employee may proceed to the next step, *i.e.* intention to search for alternatives. This in turn leads to enacting of the actual search. "Search for alternatives" implies collecting information from the labour market. Successful completion of this stage results in an employee well-informed regarding the availability of alternative employment opportunities and their associated merits and demerits. "Evaluation of alternatives" proceeds to intention to quit or stay. If an individual perceives that the available alternatives are not favourable in comparison to the existing job, the process may end at this stage. But, if the alternatives are perceived to be favourable, a quitting decision is taken and subsequently, at a later stage, quitting behaviour is enacted.

In conclusion, Mowday, Koberg and McArthur (1984) state that the major contribution of Mobley's (1977) model was to suggest that job attitudes are most directly related to withdrawal cognition and only indirectly related to actual turnover behaviour. Mobley's (1977) heuristic model does not address the question of what motivates an employee's curiosity to engage in the first step of the model, *i.e.* evaluate the existing job. Furthermore, Winterton (2004) argues that the Mobley model is over-specified by detailing elements in the process that are effectively redundant.

2.2.2 Mobley, Horner and Hollingsworth's (1978) empirical evaluation of Mobley's turnover model

Mobley, Horner and Hollingsworth (1978) developed and empirically tested an alternative version of Mobley's (1977) heuristic turnover model. The model, as illustrated in Figure 2.2 consists of two biographical variables (age and tenure), job satisfaction, thinking about quitting, perceived probability of finding an acceptable alternative job, intention to search, intention to quit, and actual quit/stay behaviour. The model underpins job satisfaction as the first step of the turnover process, and introduces age and tenure as the determinants of job satisfaction. The

model suggests that both age and tenure have an effect on job satisfaction as well as the probability of finding an acceptable alternative job.

Figure 2.2. Mobley, Horner and Hollingsworth's (1978) linkages employee turnover model

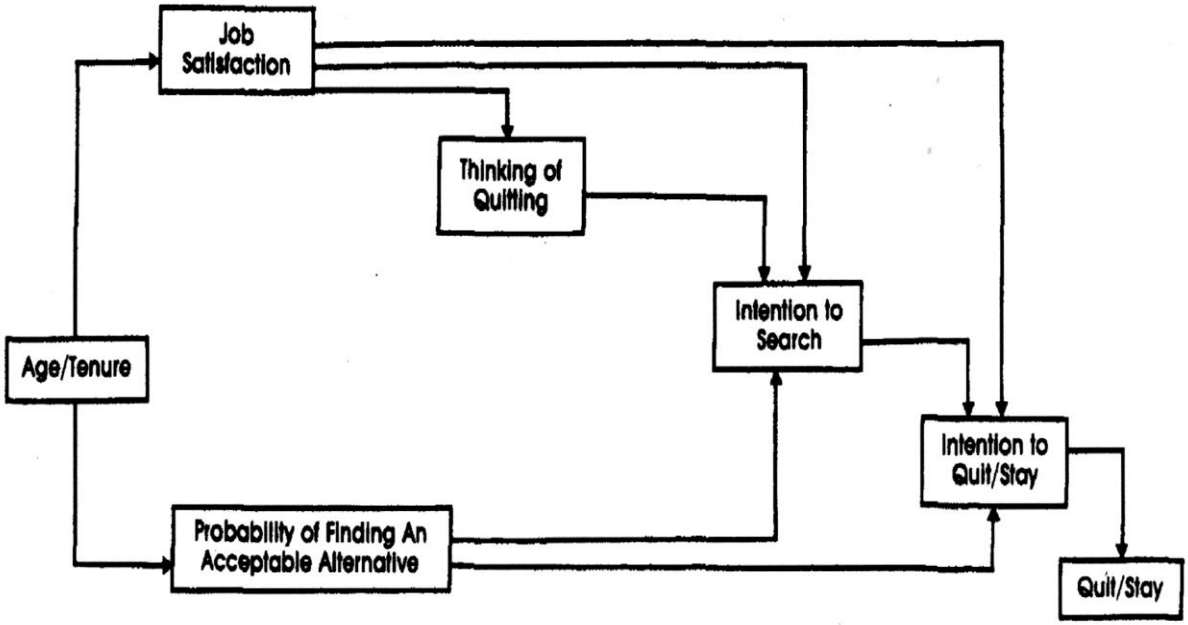


Figure 2.2: Portrayal of the intermediate linkages in the employee withdrawal process model. Adapted from W.H. Mobley, S.O. Horner and A.T. Hollingsworth, 1978. *Journal of Applied Psychology*. An evaluation of precursors of hospital employee turnover. 63(4), p. 41. Copyright 1978 by the American Psychological Association.

Drawing from Mobley's (1977) heuristic model, Mobley *et al*.'s (1978) model also proposes a number of intermediate cognitive and behavioural stages between job satisfaction and the actual quit/stay behaviour. It further draws from Ajzen and Fishbein's (1970; 1975) theory of reasoned action (TRA) and the theory of planned behaviour (TPB) in contending that intention to enact a behaviour is the immediate predecessor of the actual behaviour. In terms of employee turnover, intention to quit/stay is regarded as the immediate predecessor of the actual quit or a stay behaviour. The main deviation of this model from Mobley's (1977) original heuristic model is its rejection of a linear process conceptualisation of the turnover process. This model contends that an employee can follow any one of about five different paths in making a turnover decision, all starting when an employee is prompted by age and/or tenure to review his/her job satisfaction. Firstly, the age/tenure-job satisfaction interplay may lead directly to intention to quit/stay, followed by the actual quit/stay behaviour. Secondly, the age/tenure-job satisfaction

interplay may lead to intention to search, followed by intention to quit/stay, then the actual quit/stay behaviour. Thirdly, the age/tenure-job satisfaction interplay may lead to thinking of quitting, followed by intention to search, then intention to quit/stay and ultimately the actual quit/stay behaviour. Fourthly, the age/tenure factors may prompt an employee to review his/her probability of finding an acceptable alternative, followed by intention to search and then intention to stay/quit and ultimately the quit/stay behaviour. The fifth and last possible path happens when age/tenure prompt an employee to review his/her probability of an acceptable alternative, which is then directly followed by intention to quit/stay and ultimately the actual turnover behaviour.

The results of Mobley *et al.*'s (1978) study are consistent with Mobley's (1979) original propositions regarding the job satisfaction-turnover pathway. The correlation between intention to quit/stay and the actual quitting/staying behaviour was significantly stronger than the correlation between job satisfaction and the actual quitting/staying behaviour. Similarly, significant coefficients were observed between job satisfaction, thinking of quitting and intention to search. Furthermore, the results of Mobley *et al.*'s (1978) empirical evaluative study demonstrated that intention to quit was the only construct that had a significant correlation coefficient with the actual turnover behaviour, demonstrating the primacy of intention to quit in determining the actual quitting behaviour. In conclusion, the results of Mobley *et al.*'s (1978) model confirmed that intention to quit/stay is the primary predecessor of the actual quitting or staying behaviour, while the relationship between job satisfaction and the quitting/staying behaviour is mediated by other turnover cognitions in the model, including intention to quit/stay, intention to search and so on. Mobley *et al.*'s (1978) model does not answer the question of which individual personal dispositions could be responsible for initiating the process of turnover. The model would also be difficult to use during employee selection to identify employees that are likely to quit/stay.

2.2.3 Mowday, Koberg and McArthur's (1984) empirical evaluation of Mobley's turnover model

Mowday, Koberg and McArthur's (1984) study also sought to empirically test and validate Mobley's (1977) heuristic turnover framework utilising a model consisting of withdrawal cognitions, intention to stay, intention to search, desire to leave, probability of finding a new job and perceived ease of finding a new job, using hospital clerical employees as samples. This study also included an additional attitudinal affective variable of organisational commitment

that is not part of Mobley's (1977) original heuristic turnover model. This concurred with the findings of some studies which reported that organisational commitment has a stronger effect on turnover intentions and the actual turnover behaviour than job satisfaction (e.g. *Mobley et al*., 1977). The model did not include job satisfaction, which is part of Mobley's (1977) heuristic turnover model.

The primary objectives of Mowday *et al*.'s (1984) empirical study were to examine the role of organisational commitment in the turnover cognitions process, double cross-validate Mobley's (1977) heuristic turnover model and establish its generalisability across samples. Regression analysis results of Mowday *et al*.'s (1984) study demonstrated that generalising the universality of the turnover cognitions process between and within samples could be problematic and could pose challenges. Regression analysis results of turnover cognitions on actual turnover behaviour could not cross-validate between and within the hospital and the clerical samples. The results of Mowday *et al*.'s (1984) study lent support to the primacy of turnover intentions in the quitting or staying decision process and behaviour. It also demonstrated the pivotal role of organisational commitment in the quitting decision process and behaviour.

2.2.4 Hom, Griffeth and Sellaro's (1984) empirical evaluation of Mobley's turnover model

Using a longitudinal study, Hom, Griffeth and Sellaro (1984) empirically evaluated a model adapted from Mobley's (1977) turnover model consisting of cognitive constructs of evaluation of existing job, job satisfaction, thoughts of quitting, expected utility of searching and cost of quitting, intention to search for alternatives, search for alternatives, evaluation of alternative, comparison of alternative to the present job, intention to quit and the actual turnover behaviour amongst hospital employees. Hom *et al*. (1984) purported to have conducted, unlike other previous studies, a full investigation of Mobley's (1977) turnover model using reliable measures. In addition to the original cognitive constructs contained in Mobley's (1977) heuristic model, Hom *et al*. (1984) incorporated one social determinant variable of the subjective norm in their model, investigating the role of the influence of the referent others on an employee's turnover decision and the consequential turnover behaviour.

Hom *et al*.'s (1984) study had three main objectives. First, the study had the objective of establishing the validity of Mobley's (1977) full model. It empirically validated all the variables that were in Mobley's original model. Second, the study had the objective of

incorporating the constructs that were neglected by previous studies, purportedly measuring them with relatively reliable measures. Third, a further objective of Hom *et al*.'s (1984) study was to include an additional variable of perceived social pressure from referent others in influencing turnover. The study followed Mobley's (1977) causal ordering, and linearly regressed each construct against other constructs that are prior to it, or its determinants, in the original theoretical model.

Hom *et al*.'s (1984) study results demonstrated that job satisfaction was accurately predicted by met expectations and the factors that are associated with evaluation of the job. Furthermore, hierarchical regression results demonstrated that thought of quitting (r = .23), expected utility of search and of quitting (r = .28), intention to search (r = .31), search behaviour (r = .30) and intention to search (r = .24) were five significant predictors of the actual quitting/withdrawal behaviour. It further demonstrated that, contrary to other previous studies (e.g. Mowday *et al*., 1984), intention to quit was not the best predictor of the actual quitting behaviour, although the correlation coefficients between the five predictors of quitting behaviour and the actual quitting behaviour were not statistically different.

Moreover, Hom *et al*. (1984, p. 170) argued that "some employees quit without having first searched for alternatives". His contention raises questions regarding the reliability of some cognitive steps in the Mobley's (1977) heuristic model. Lastly, Hom *et al*. (1984) point out that the linear combinations of predictors representing their casual determinates demonstrated that each construct was accurately predicted by the relevant causal determinants. Hom *et al*. (1982, p. 169) reckon that "Mobley's original model received empirical verification from the hierarchical analyses, although the evidence was not unequivocal". This study did not confirm the immediacy of the influence of intention to quit on the actual quitting/staying behaviour.

2.2.5 Hom and Griffeth's (1991) empirical evaluation of Mobley's turnover model

Hom and Griffeth (1991) conducted two studies to empirically validate both Mobley's (1977) heuristic turnover model and the turnover process model of Hom *et al*. (1984) through using structural equation modelling (SEM) in two samples of nurses. The models included eight variables, namely job satisfaction, thoughts of quitting, expected utility of withdrawal, search intentions, job search, comparison of alternative, intention to quit and the actual turnover behaviour. Hom and Griffeth (1991) argued that the conceptual distinctions among Mobley's (1977) explanatory constructs are weak and therefore sought to validate them with their first

study. The second study sought to establish the causal effects of Hom *et al*.'s (1984) model using SEM.

Although SEM analyses confirmed the indicators' construct validities underlying turnover cognitions, further SEM analyses of Hom and Griffeth' s (1991) model identified a general construct that could be underlying turnover cognitions. The results of this study demonstrated the possibility of existence of construct equivalence and redundancy among turnover cognitions constructs, questioning the theoretical independence of various withdrawal/turnover cognitions. This finding further questions the conceptual distinctions amongst the cognitive constructs used by Mobley (1977) as well as Hom *et al*. (1984). Moreover, the findings of the study reiterated previous findings by Hom *et al*. (1984) that some individuals quit after initiating a job search while some individuals quit before entering the job market or initiating a job search. Evidence of the phenomenon of jobless turnover was demonstrated. This observation has implications regarding the psychological process of quitting behaviour. For example, is the quitting decision process explained by turnover cognitions sufficient for explaining the quitting process? Moreover, what are other individual variables that can induce quitting behaviour? The answers to these questions are some of the objectives of this current study.

2.2.6 Sager, Griffeth and Hom's (1998) empirical evaluation of Mobley's (1977) turnover model

Sager, Griffeth and Hom (1998) proposed and empirically evaluated a model consisting of only three turnover cognitive constructs, *i.e.* thinking of quitting, intention to search, and intention to leave, all drawn from Mobley's (1977) turnover decision model. The study used a sample of sales personnel and adopted SEM analysis. This study characterised turnover cognitions as "repressing mental decisions intervening between an individual's attitudes regarding a job and the stay or leave decision" (Sager *et al*., 1998, p. 255). Furthermore, Sager *et al*. (1998) argued that these three turnover cognitions represent the fundamental psychological constituents of a turnover decision process. For establishing dimensionality and definitions of these constructs, these authors characterised thinking of quitting as a cognition associated with an employee who considers leaving an organisation; intention to search as a cognition associated with an employee who decides to search for another job; intention to leave as a cognitive pronouncement occurring when an employee decides to leave an organisation at some

unspecified point in the future. The study further sought to explicate the dimensionality and structural relationships amongst the three fundamental turnover cognitions.

The SEM findings of Sager *et al*.'s (1998) empirical research reproduced a poor covariance structure when the order of the two cognitions followed Mobley's (1998) original model (intention to search-intention to quit) as opposed to a revised order model (intention to quit-intention to search), demonstrating that contrary to the theorisation of Mobley (1977), intention to search could be preceding intention to quit in the turnover decision process. This finding corroborated Hom *et al*.'s findings which determined that employees may quit a job before intending to search for another job, further raising the question of the importance of the role played by static, individual, idiosyncratic dispositions or characteristics like cultural values.

2.2.7 Mobley, Griffeth, Hand and Meglino's (1979) employee turnover theoretical model

One of the "core models" of turnover process (Steel, 2012, p. 346), Mobley, Griffeth, Hand and Meglino's (1979) theoretical framework is the product of a meta-analytical analysis of linear models and mostly bivariate relationships studies. The resultant conceptual turnover process model is a very exhaustive, complex and multifaceted framework that incorporates numerous factors which allegedly contribute to turnover. The model focuses on an individual as a unit of analysis and identifies individual demographic and personal variables, overall satisfaction, organisational and work environment factors, job content factors, external environment factors, occupational groupings and some recently developed constructs as the determinants or predecessors of intention to quit/stay, and subsequent quitting/staying behaviour. The variables of Mobley *et al*. (1979) are depicted in Figure 2.3. These variables are examined more closely in the following section.

In a nutshell, Mobley *et al*. (1979) developed an organisational-individual-economic/labour market turnover model which consisted of intention to quit and intention to search as immediate predecessors of the turnover behaviour, while job satisfaction and individual values mediate these links. A detailed review of the model follows.

Figure 2.3. Mobley, Griffeth, Hand and Meglino's (1979) employee turnover model.

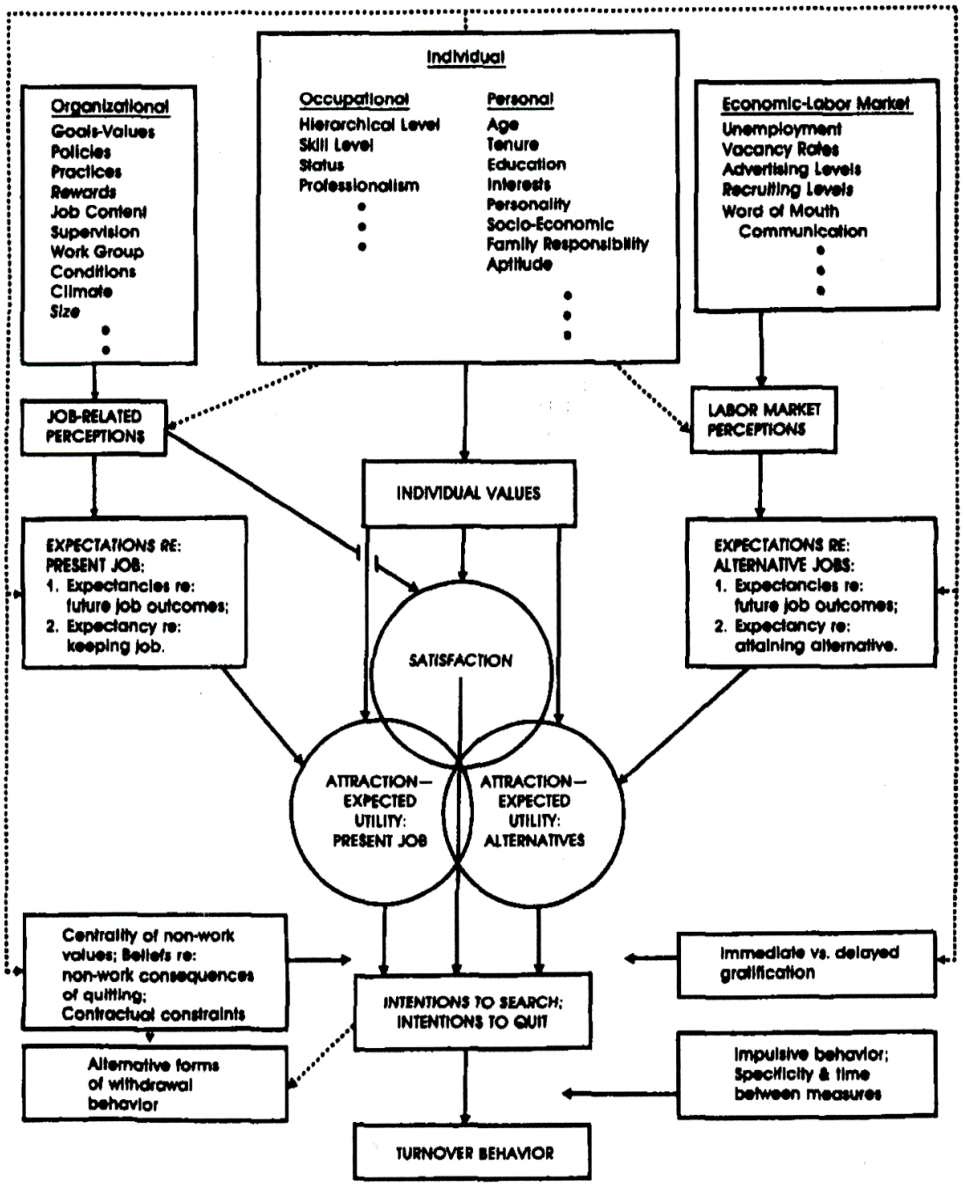


Figure 2.3: A schematic representation of the variables and process of employee turnover depicting the interaction of individual, organisational and economic variables. Adapted from "Review and conceptual analysis of the employee turnover process" by W.H. Mobley, R.W. Griffeth, H.H. Hand, & B.M. Meglino, 1979. *Psychological Bulletin. .82*(3), p. 517. Copyright 1979 by the American Psychological Association.

2.2.7.1 Individual Demographic and Personal Variables

Mobley *et al.*'s (1979) model identifies occupational variables like hierarchical level, skill level, status and professionalism, and personal characteristics like age, tenure, educational level, interests, socioeconomic status, family responsibility, aptitude and personality as individual variables that effect turnover behaviour. Mobley *et al*. (1979) contend that there is general evidence suggesting a negative relationship between age, tenure, family/marital status responsibility, level of education, and turnover. All except one of these variables are malleable, *i.e.* dynamic and determined by personal circumstances at one point or the other in time, except personality, which is regarded as relatively stable over time (Matsumoto & Juang, 2017). Further examination of the other personal and demographic variables is beyond the scope of this study.

Mobley *et al*. (1979) cite a very limited number of studies that examined the association between personality and turnover intentions or behaviour. These authors only acknowledge the role played by personality in turnover intentions and turnover behaviour and shed little light regarding its role in influencing turnover intentions and/or turnover behaviour. Lack of research in the relationship between personality and turnover is eminent in the limited studies reviewed by these authors. In fact, personality is only mentioned in passing by Mobley *et al*. (1979), without paying any considerable attention to it. Theory and research have demonstrated that some employees quit their jobs without having first searched for alternatives (Hom *et al*., 1984) while some employees may quit as a result of irrational decisions. The static approach to turnover (Steel, 2012) suggests that non-malleable personal characteristics could prompt turnover decision.

2.2.7.2 Organisational Variables

Mobley *et al*. (1979) identified a number of organisational factors that have an influence on turnover intentions and/or turnover behaviour. According to Mobley *et al*.'s (1979) model, the goals, values, policies, practices, job content, supervision, work group, conditions, climate and size are organisation-wide factors that impact on turnover intentions and/or turnover behaviour. Mobley *et al*. (1979) argued that previous studies have generally determined that higher salaries are associated with higher tenure, the difference between expected and actual pay is associated with higher turnover, there are mixed outcomes regarding the relationship between supervision and turnover, and an overall support for moderate negative relationship between supervision and turnover. Furthermore, partial but significant support has been reported for a negative

relationship between adverse peer group relations and perceived status, and turnover. Mobley *et al*. (1979) also cited a number of studies that corroborated a significant and negative relationship between perceived value of work, intrinsic motivation and intrinsic satisfaction with turnover.

Clarity of organisational goals, employee supporting organisational policies, fair and equitable rewards, employee supportive supervision and work groups, favourable working conditions and a positive organisational climate are all positively related to job satisfaction, yet negatively associated with intentions to quit and actual turnover behaviour (Allen, Shore & Griffeth, 2003; Pare & Tremblay, 2007;). Furthermore, Mobley *et al*.'s (1979) turnover model demonstrates that job-related perceptions, including perceived job security, determine job satisfaction. Job satisfaction in turn determines turnover intentions and ultimately actual turnover behaviour.

2.2.7.3 Economic-Labour Market Variables

The third set of major independent variables in Mobley *et al*.'s (1979) turnover process model is economic/labour market factors comprising unemployment, vacancy rates, advertising levels, recruiting levels and word of mouth communication. According to this model, economic/labour factors have a direct effect on how employees perceive labour market conditions, which in turn determine expectations regarding alternative job, which in turn lead to attraction-expected utility of alternatives, leading to intentions to search/quit and ultimately, a quitting decision is made. Mobley *et al*. (1979) argue that research indicated that favourable labour-market conditions, e.g. high employment levels, vacancy rates and expectancy of finding an alternative job have a positive significant relationship with increased employee turnover.

2.2.7.4 Individual Values

Mobley *et al*. (1979) reckon that individual values are determined by individual personal factors. According to their model, differences in hierarchical levels in the organisation, statuses, professionalism, skill levels, age groups, tenures, educational levels, personalities, socio-economic backgrounds and family responsibilities lead to value differences amongst individual employees. Furthermore, the model indicates that individual values have an impact on job satisfaction, attraction-expected utility of the present job, and attraction-expected utility of the alternative job/s. Put differently, satisfaction with one's job, perceived benefits that are associated with the appraisal of the current job, conversely, the alternative job opportunities in

the labour market are all determined by a combination of what an individual values most at the particular point in time together with his or her personal circumstances. According to the model, individual values mediate the influence of individual factors on job satisfaction, the expected utility of the present job and attraction-expected utility of the alternative job respectively.

2.2.7.5 Job Satisfaction and Organisational Commitment

As indicated in Figure 2.3, according to Mobley *et al*.'s (1970) model, satisfaction which is defined as the affective reaction of an employee's appraisal of the job, is immediately preceded by individual values and job-related perceptions while individual factors are distant predecessors of job satisfaction. Stated differently, while individual values and job-related perceptions immediately precede job satisfaction, the relationship between job satisfaction and individual factors is mediated by individual values. Moreover, the model indicates that job satisfaction is the immediate predecessor of intention to search as well as intention to quit. This does not only underline the importance of job satisfaction on intention to search, but also on intention to quit, the dependent variable of this research endeavour.

Mobley *et al*. (1970) omitted one of the consistently cited job-related attitudes in their model *i.e.* organisational commitment, a variable that has been associated with both job satisfaction (Winterton, 2004) and turnover intention (Michaels & Spector, 1982; Shore & Martin, 1989; Tett & Meyer, 1993; Wasti, 2003). According to Mobley *et al*. (1970), organisational commitment, represents a global evaluative affiliation between an employee and an organisation, denoting job satisfaction, organisational identification, involvement, willingness to exert great effort on behalf of the organisation and willingness to maintain organisational membership. Hence, it is expected that there should be a close association between job satisfaction and organisational commitment. Described in these terms, it would be expected that employees high on organisational commitment would harbour less intentions to quit an organisation while low organisational commitment is expected to be associated with higher intention to quit. There is a negative association between organisational commitment and turnover intentions (Mobley *et al*., 1970).

2.2.7.6 Behavioural Intentions

Mobley *et al*. (1979) draw from Ajzen and Fishbein's (1970) theory of reasoned action (TRA) and theory of planned behaviour (TPB) in describing intention-behaviour linkage in

maintaining that all individual behaviour is determined by the intention to cause that specific behaviour and that turnover behaviour is preceded or determined by turnover intention. These theories recognise the role of beliefs and attitudes in determining behaviour. Turnover behaviour is therefore considered to be immediately preceded by turnover intentions. Mobley *et al*. (1979) identify two behavioural intentions in the turnover process, *i.e.* search intention and quitting intention. Both of these intentions are regarded as immediate predecessors of the quitting behaviour.

According to Mobley *et al*. (1979), both intention to search and intention to quit are derived from job satisfaction, attraction-expected utility of the present job, attraction-expected utility of alternative job, the centrality of non-work values, and immediate versus delayed gratification. In turn, according to Mobley *et al*.'s (1979 model, search/turnover intentions have a direct effect on turnover behaviour. Mobley *et al*. (1979) argue that impulsive behaviour and non-solicited attractive alternatives alter the intention to search/quit-quit behaviour linkage. The authors did not explain the nature of individual dispositions that might explain this deviation.

2.2.7.7 Multivariate Studies

Over and above the bivariate studies that are the source of association between variables and turnover intention/behaviours reported above, Mobley *et al*. (1970) also refer to multivariate studies and models that incorporate a number of variables to test their simultaneous influence on variance in turnover intention/behaviour. For example, Porter and Steers (1973) multivariate study consisted of a number of variables, including organisational commitment, satisfaction with supervision, satisfaction with co-workers, satisfaction with the work itself, satisfaction with pay and satisfaction with promotion opportunities. They found that organisational commitment, satisfaction with promotion and satisfaction with work itself were the most important variables that differentiated between stayers and leavers, respectively. Parasuraman's (1982) model included turnover as a dependent variable, turnover intention as a meditating variable and job satisfaction, organisational commitment, job involvement, trait anxiety, education, tenure, age, sex, stress and absenteeism as independent variables, and found that personal variables have little influence on turnover, while felt stress, turnover intentions and organisational commitment were the best predictors of voluntary turnover. Other multivariate studies/models (e.g. MacIntosh & Doherty, 2010; Michaels & Spector, 1982; Winterton, 2004) will be revisited in the subsequent sections.

In closing, it is worth highlighting that Mobley *et al*.'s (1979) model is too complex and multifaceted to swallow in a single gulp of a study. In fact, Michaels and Spector (1982) obviously and rightly assert that a study with all of Mobley *et al*.'s (1979) variables would be beyond a scope of any single study.

2.3 MICHAELS AND SPECTOR'S (1982) EMPIRICAL EVALUATION OF MOBLEY AND ASSOCIATES' MODEL

To empirically evaluate Mobley *et al*.'s (1979) model, Michaels and Spector (1982) proposed a turnover model that tested the interrelationships among selected variables from the original model of Mobley *et al*. utilising a sample of mental health centre employees. The model consisted of two organisational and work environment variables (perceived job characteristics and leadership consideration), four individual demographic and personal characteristics (age, tenure, annual salary and job level), one affective attitudinal variable (job satisfaction), one economic factor (perceived alternative employment) and one turnover cognition construct (intention of quitting) all drawn from Mobley *et al*. 's (1979) turnover decision model. These authors further included pre-employment expectations and an additional affective attitudinal variable (organisational commitment) into their model. The authors argued that the inclusion of these two variables was motivated by strong support that emanated from previous research regarding their influence on turnover intentions and turnover behaviour. The model together with its path analysis results is illustrated in Figure 2.4.

Michaels and Spector's (1982) zero-order correlation coefficient results indicated that actual turnover behaviour was significantly, yet moderately correlated with intention to quit (r = .41) and significantly but weakly correlated with job satisfaction (r = .20) and organisational commitment (r = .16). These findings corroborated theoretical postulations regarding the primacy of turnover intentions on turnover behaviour. Turnover intention was also found to be significantly and strongly correlated with job satisfaction (r = .68) and organisational commitment (r = .61). Organisational commitment and job satisfaction also revealed significant and high inter-correlation (r = .67). Furthermore, most of the variables that are adjacent to each other in the model, with the exception of salary, organisational level and tenure (all three also exhibited no relationship with turnover behaviour or intention to quit), were found to be significantly correlated to each other, thus partially corroborating the validity of Michaels and Spector's (1982) multivariate and multifaceted turnover model.

Figure 2.4. Michaels and Spector's (1982) fitted Turnover Model

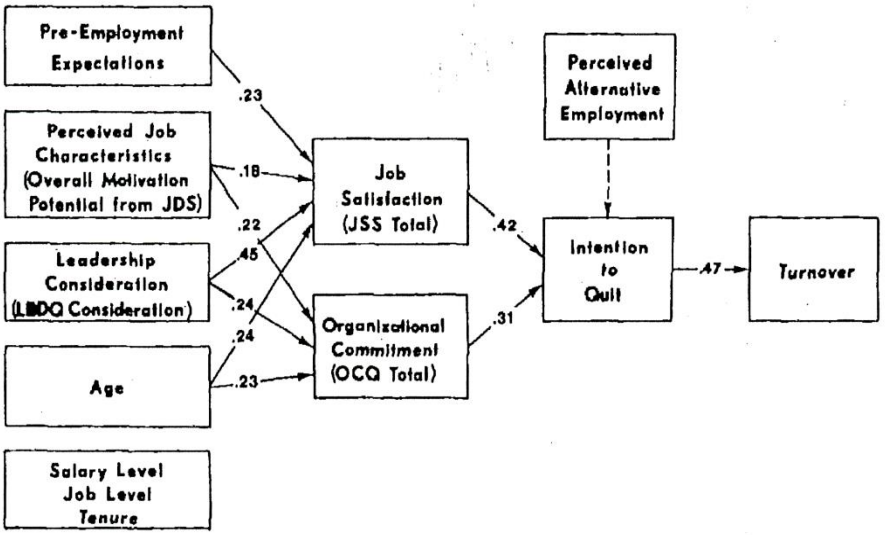


Figure 2.4 Path Analysis of Michaels and Spector's (1982) empirically fitted turnover Model. Adapted from "Causes of employee turnover: a test of the Mobley, Griffeth, Hand and Meglino Model" by C.E Michaels, & P.E. Spector, 1977. *Journal of Applied Psychology, 67*(1), p. 57. Copyright 1982 by the American Psychological Association.

As illustrated in Figure 2.4, multiple regression analysis derived path coefficients represented as beta weights results established that the highest beta weight was associated with intention to quit-turnover path (β = .47), followed by leadership- job satisfaction path (β = .45) and then job satisfaction-intention to quit path (β = .42). The path coefficients result further confirmed the importance of intention to quit on actual turnover/withdrawal behaviour. Also, the important role of job satisfaction and commitment on turnover intentions was corroborated by the path analysis results. On the one hand, the path analysis results revealed, firstly, that perceived alternative employment does not have a direct influence on intention to quit, and secondly, that tenure, salary level and organisational were not related to other variables of the study, including job satisfaction, organisational commitment, intention to quit and actual quitting behaviour. On the other hand, the path analysis results demonstrated that age, perceived task characteristics and perceived consideration by the supervisor have a significant impact on total satisfaction and commitment. In general, Michaels and Spector (1982) contend that the results of their study partially, yet to a great extent validated Mobley *et al*.'s (1979)

turnover model although they cast doubt on the role of perceived alternative employment in quitting behaviour.

2.4 STEEL'S 2002 TURNOVER THEORETICAL MODEL

Steel (2002) draws from turnover process approaches to develop a relatively complex and multifaceted theoretical framework of employee turnover. The author proposed a series of three stages that lead to intention to quit/stay, ultimately culminating in quitting behaviour. Steel (2002) fails to describe the role of personal and job situation variables, referred to as personality, advanced opportunity, personal mobility and non-work alternatives. However, the position and paths associated with these variables, as reflected in Figure 2.5 indicate that personal characteristics and job situation have an impact on the first stage of passive scanning in the turnover process while subjective norms, costs and benefits associated with job seeking mediate this relationship. Differences in personality characteristics result in variations regarding whether an employee proceeds to scan the job market for alternative jobs or not. The three stages of the model are as follows:

Stage 1: Passive Scanning: at this first stage, a prospective "leaver" is contemplating leaving an organisation, has not yet initiated an active search, but is "putting the ear on the ground" to scan the available opportunities in the labour market. According to Steel (2002), this stage is characterised by imprecise scanning of media accounts of unemployment rates, resulting in sketchy, haphazard, impressionistic knowledge of employment alternatives. The drivers of this stage are based on the resourcefulness of the individual, e.g. personality. At this stage the success, or lack thereof, is determined by subjective norms and costs and/or benefits linked to job search. For example, supportive, positive, subjective perceptions of family members, significant others, co-workers, etc. regarding quitting combined with low costs associated with job scanning may encourage a potential leaver to progress to the next stage of the process.

Figure 2.5. Steel's (2002) evolutionary search model of employee turnover

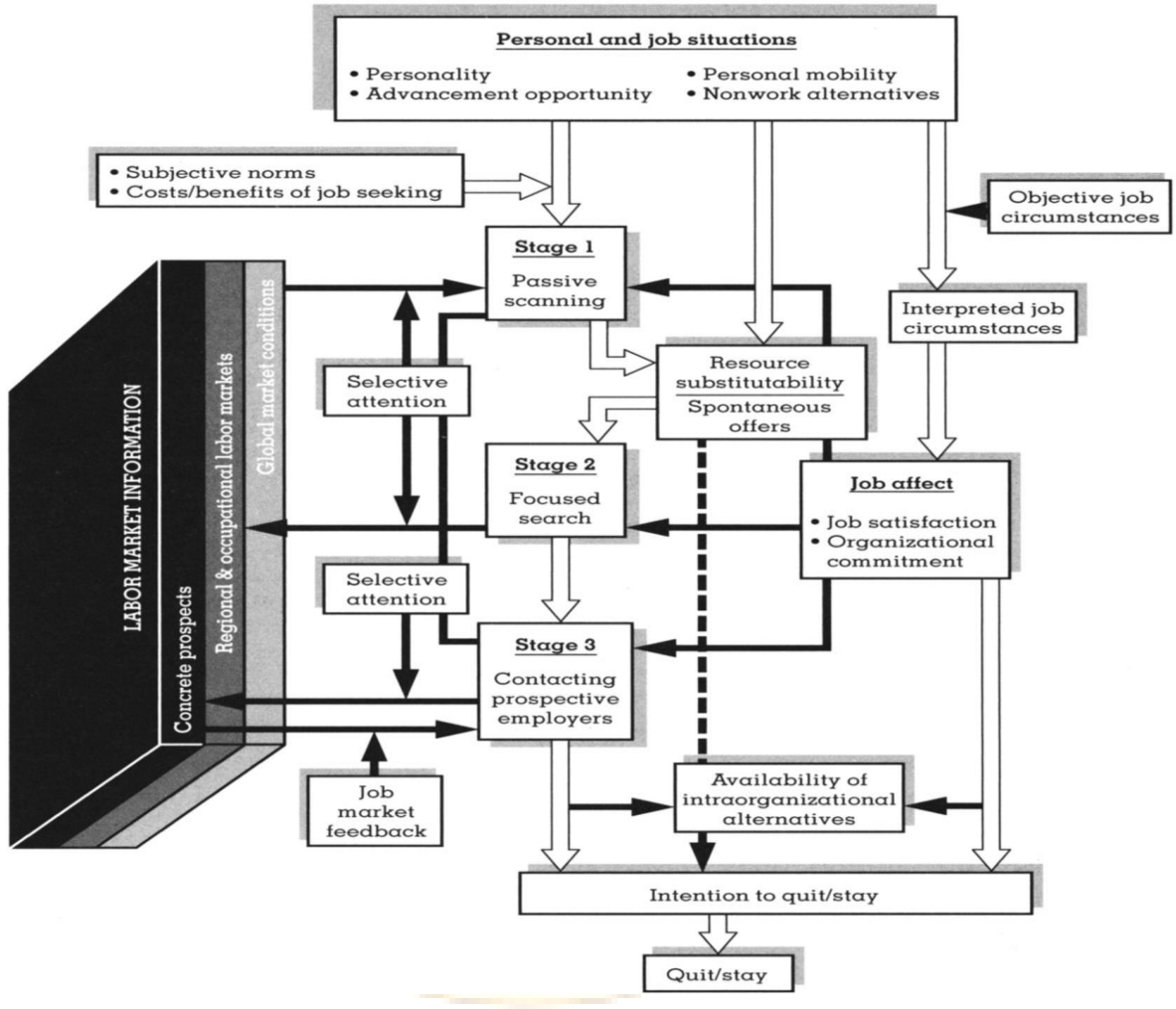


Figure 2.5: The stages of the evolutionary search model of employee turnover. Adapted from "Turnover theory at the empirical interface: problems of fit and function" by R.P. Steel, 2002. *Academy of Management Review, 27*(3), p. 355. Copyright 2002 by the Academy of Management.

Stage 2: Focused Search: the second stage of Steel's (2002) model is called "focused search" and is characterised by selective attention of the availability of opportunities in the open labour market. At this stage the potential "leaver" attentively scans job advertisements in media publications, conducts systematic exploration of the promising leads and becomes relatively better informed of the opportunities in the labour market. The most important drivers in this

stage are the two job effects, *i.e.* job satisfaction and organisational commitment. According to Steel (2002), both job satisfaction and organisational commitment have a significant effect on the focused search; employees with high job satisfaction and organisational commitment are less likely to engage in focused search, while employees low on job satisfaction and organisational commitment are more likely to engage in an extensive and quality focused search, which may lead to the next stage of the turnover model.

Stage 3: Contacting Prospective Employees: the third stage of Steel's (2002) turnover process model is characterised by active search for new employment opportunities in the open labour market and the existence of favourable intra-organisational alternatives may curtail progress to the next step. Also, the potential "leaver" gets feedback from the job market. Favourable feedback from the labour market increases intention to quit and unfavourable feedback increases the intention to stay with the present organisation. Steel's (2002) model acknowledges the significant role played by personality, subjective norms (which are closely related to culture), job satisfaction, organisational commitments and intention to stay/quit (turnover intention) in the turnover decision making process.

2.5 MARTIN'S (1979) CONTEXTUAL MODEL OF EMPLOYEE TURNOVER INTENTIONS

Martin (1979) developed and tested an integrative and expanded model of employee turnover that purportedly, contrary to the narrow approaches of previous models and studies, went a step further by incorporating additional structural/process variables, an environmental variable, and a mediating variable over and above the over-researched demographic variables. The model regarded turnover intention, conceptualised as intent to leave, as the dependent variable and defined it as the extent to which an employee have the intention to leave the current organisation (Martin, 1979).

Martin (1979, p.315) defined job satisfaction as "the extent to which organisational members have positive affective orientations toward membership in the system", and represented it as an intervening variable between intent to leave and six biographical variables, eleven structural variables and one environmental variable, all of which were treated as independent variables. Work commitment, which is semantically different but has a strong resemblance to organisational commitment, was one of the structural variables in the model. Martin (1979) defined work commitment as the degree to which the employment function defines the self,

identity, continued membership, beliefs, values and goals and satisfaction with individual work objectives.

Other process/structural independent variables in Martin's (1979) model which are closely related to organisational culture are, firstly, integration, defined as the degree to which participation in key organisational and social networks take place (integration was identified as a factor of organisational climate, a variable closely related to organisational culture in Matsumoto & Juang, 2017); centralisation, which reflects concentration of power as determined by employee participation in decision-making and is closely associated with Hofstede's power distance, and communication styles and strategies. All these variables embody and reflect the essence of fundamental organisational culture. Opportunity is another independent variable that was associated with the availability of employment opportunities in the labour market and is associated with employment rates and recruitment levels.

The results of Martin's (1979) study revealed that an increment in R^2 test indicated that the interaction between opportunity and job satisfaction was not statistically significant. Opportunity was eliminated from further analysis. Standardised partial regression analysis indicated that job satisfaction had statistically significant interactions with routinisation (-.36) and instrumental communication (.15). These results suggested that job satisfaction decreases with an increase in routinisation, but increases with an increase in instrumental communication. Further standardised partial regression analysis results indicated that intent to leave had statistically significant partial regression coefficients with job satisfaction (-.37) and upward mobility (-.22) (Martin, 1977). The results of this study underlined, firstly, the importance of turnover intention in the turnover decision process as its immediate determinant/predecessor, and secondly, the important role of job satisfaction and organisational climate/culture in turnover intentions. This study also highlighted the potential impact of structural process factors in turnover intentions, including work commitment.

2.6 WINTERTON'S (2004) CONCEPTUAL MODEL OF RETENTION AND TURNOVER

Winterton (2004) developed a conceptual model of employee turnover and retention that questioned some conventional views and assumptions of traditional turnover theories, including Mobley and colleagues' core theories. As illustrated in Figure 2.6, this model conceptualised intention to quit and the actual quit behaviour to be consequences of four

factors, *i.e.* low job satisfaction, low organisational commitment, favourable labour market opportunities and ease of movement. Winterton (2004) argued that a combination of perceived negative work-related attitudes and favourable economic conditions as characterised by high perceptions of attractive employment opportunities in the labour market and perceived ease of movement result in turnover intention being converted to actual quit behaviour.

Figure 2.6. Winterton's (2004) conceptual model of employee turnover and retention.

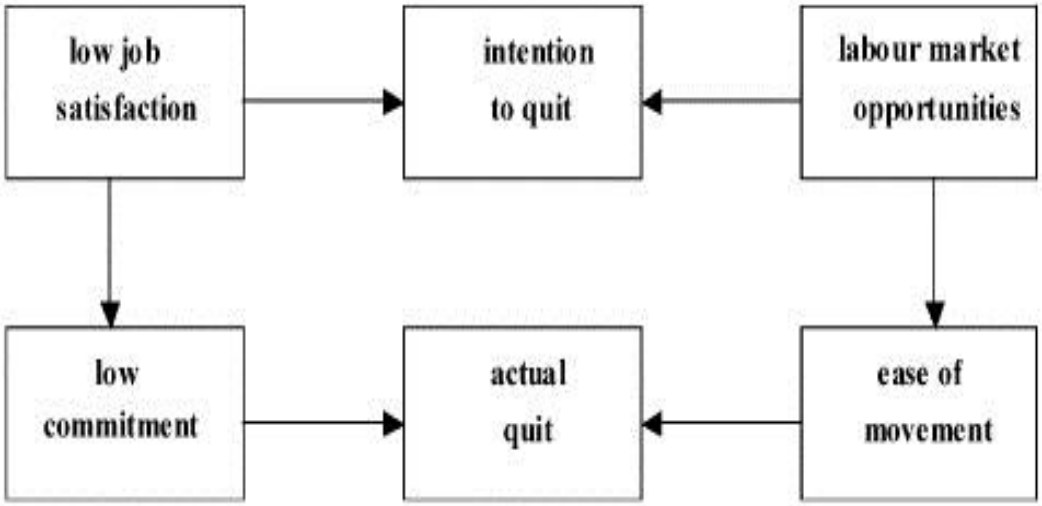


Figure 2.6: A conceptual model of employee turnover depicting the dynamics between job satisfaction, commitment, labour market opportunities, intention to quit and the actual quitting behaviour. Adapted from "A conceptual model of employee turnover and retention" by J. Winterton, 2004. *Human Resource Development International 7*(3), p. 375. Copyright 2004 by Taylor & Francis LTD.

As illustrated in Figure 2.6, and contrary to Mobley and colleagues' model, the turnover process is not linear and can start anywhere. Winterton (2004) reiterates the core theories' assertion that job dissatisfaction, a push effect, can stimulate intention to quit. A pull effect, *i.e.* perceived alternatives in the labour market, does not need job satisfaction to be low to stimulate turnover intention. Furthermore, low organisational commitment and ease of movement do not need low job satisfaction to stimulate turnover and turnover intentions. Winterton (2004) argues that turnover could be high despite high job satisfaction and

organisational commitment as a result of abundant work opportunities in the labour market and/or organisational culture that does not encourage loyalty. Moreover, turnover may remain low because of high organisational commitment despite low job satisfaction and/or limited job opportunities in the labour market.

Winterton's (2004) model alludes to the fact that although job satisfaction plays a pivotal role, it is not the only motivating factor to lead to the initiation of the process of turnover decision making. The model also reveals that job satisfaction and organisational commitment are more open to management interventions in controlling turnover as opposed to economic and labour market factors. Winterton's (2004) model fails to acknowledge the possible role of individual dispositions in the turnover process.

2.7 MACINTOSH AND DOHERTY'S (2010) ORGANISATIONAL CULTURE-JOB SATISFACTION-INTENTION TO LEAVE MODEL

Based on the premise that culture, which is oftentimes conceptualised in terms of values, beliefs and/or basic assumptions that affect individual attitudes and behaviour and manifest in practices, i.e. company artefacts, dress code, grooming standards, member dialogue, ceremonies, MacIntosh and Doherty (2010) developed and empirically evaluated an organisational culture-job satisfaction-intention to leave model. The model hypothesises that organisational culture has a significant on both job satisfaction and intention to leave. It further contends that job satisfaction mediates the influence of organisational culture on intention to leave. The simplified illustration of the model is illustrated in Figure 2.7.

MacIntosh and Doherty (2010) conceptualised organisational culture as a multidimensional construct in terms of the prevailing atmosphere, connectedness, formalisation, staff competencies, sales, service equipment, organisational presence and service programmes as its manifest dimensions. They hypothesised that each of these cultural dimensions will have a significant effect on both job satisfaction and intention to leave.

Furthermore, MacIntosh and Doherty (2010) conceptualised the four variables that produce significant paths as follows: atmosphere was conceptualised in terms of whether the organisation is inviting and welcoming, and the extent to which the staff is approachable; connectedness was conceptualised in terms of staff and client's sense of affiliation and belonging to the organisation; formalisation was conceptualised in terms of standardisation and

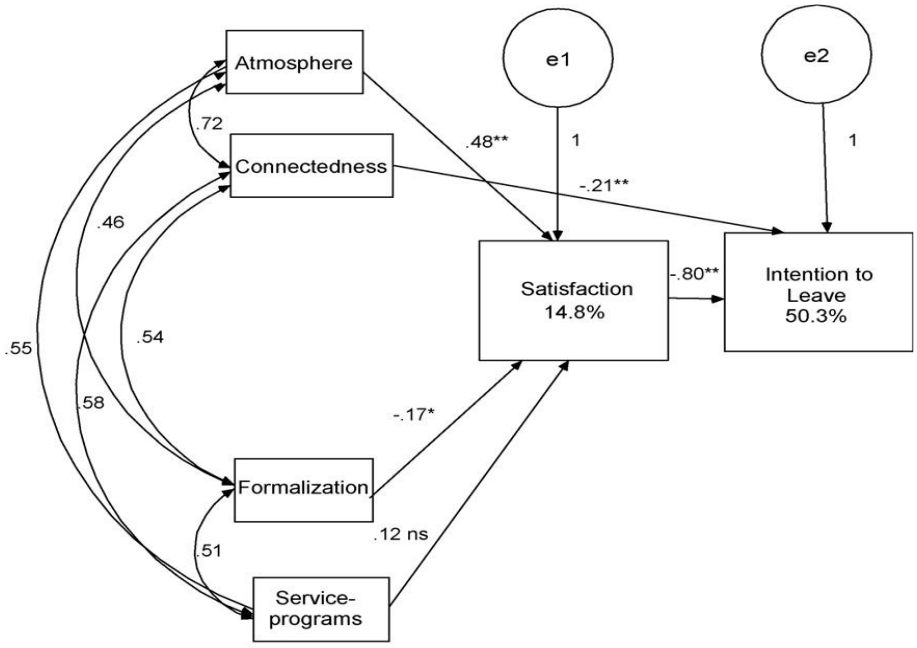
formalisation of rules and procedures; service programmes was conceptualised in terms of cleanliness and availability of work and service equipment and working conditions.

Figure 2.7. MacIntosh and Doherty's (2010) organisational culture, job satisfaction and intention to leave model

Figure 2.7: Role of organisational culture in job satisfaction and intention to leave. Adapted from "The influence of organisational culture on job satisfaction and intention to leave" by E.W. MacIntosh, & A. Doherty, 201. *Sport Management Review, 13,* p. 109. Copyright 2010 by Elsevier BV.

The empirically tested model results depicted in Figure 2.8 indicate that job satisfaction partially mediates the relationship between organisational culture and intention to leave. Correlation coefficients varying between .18 and .78 indicated no problems with multicollinearity and confirmed the significant relationships between cultural dimensions and intent to leave and also between cultural dimensions and job satisfaction. Also, organisational culture explained 14.3% of variance in job satisfaction and 5.3% variance in intention to leave. The model results underscore the important part played by culture in the relationship between job satisfaction and intention. The results indicate that the influence of culture of turnover intention is mediated by job satisfaction.

Figure 2.8. MacIntosh and Doherty's (2010) fitted intention to leave model



Note: $\chi^2 = 3.5$, $p < .50$; NFI = .99; CFI = 1.00; RMSEA = .033, * $p < .01$, ** $p < .001$

Figure 2.8: An empirically fitted model of organisational culture dimensions, job satisfaction and intention to leave. Adapted from "The influence of organisational culture on job satisfaction and intention to leave" by E.W. MacIntosh, & A. Doherty, 201. *Sport Management Review, 13*, p. 114. Copyright 2010 by Elsevier BV.

2.8 LEE AND MITCHELL'S (1994) UNFOLDING MODEL OF VOLUNTARY TURNOVER

Lee and Mitchell (1994) developed an unfolding model of voluntary employee turnover that is grounded on decision-based psychological theory. Three so-called "theories" underpin this model, *i.e.* image theory, push theory and pull theory (Lee & Mitchell, 1994; Lee, Mitchell, Holtom, McDaniel & Will, 1999). Challenging the classical decision making theories which purport that decision making is guided by the pursuit of maximising the expected utility of the decision by choosing the best alternative, Beach and Mitchell's (1990) image theory contends that individuals, rather unconsciously and spontaneously select and screen incoming information for its relevance in decision making and assess whether it could be integrated into their value images. While on the one hand, push theory attributes employee turnover to factors

internal to an individual, e.g. cognitions, attitudes, personal dispositions, values, etc. pull theory, on the other hand, attributes employee turnover to factors external to the individual, e.g. labour market conditions and ease of movement (Lee & Mitchell, 1994). The model identified five cognitive phenomena that combine serially to construct one of five alternate decision paths that could be implemented by employees in making a turnover decision. The five decision paths are depicted in Lee and Mitchell's (1994) unfolding turnover model in Figure 2.9.

The fundamental, pivotal elements of the model are described by Lee and Mitchell (1994) as follows:

- *Shock* – shock is a specific jolting or jarring occurrence either within or outside of the organisation that initiates and invokes the cognitions of deliberately evaluating and judging one's current job and/or appraising the possibility of quitting one's current job. It generates meaning about individuals' jobs. A shock could be positive or negative, expected or unexpected, internal or external to the person and is compared to an individual's own image which is conceptualised in terms of values, goals and plans. If there is a discrepancy between a shock and an individual's own image, thoughts of leaving are invoked.
- *Engaged script* – an engaged script is a "pre-existing plan of action that could be based on past experience, observation of others, reading, or social expectations" (Lee *et al.*, 1999, p. 451). It is concerned with whether the career of an individual is progressing as he/she had planned.
- *Image violation* – drawing from the image theory, Lee *et al*. (1999) argue that image violation occurs when an individual's image, viewed in terms of values, goals, beliefs and goal strategies, is incompatible with those of the organisation and/or those implied by a shock event.

Figure 2.9. Lee and Mitchell's (1994) unfolding model of voluntary turnover

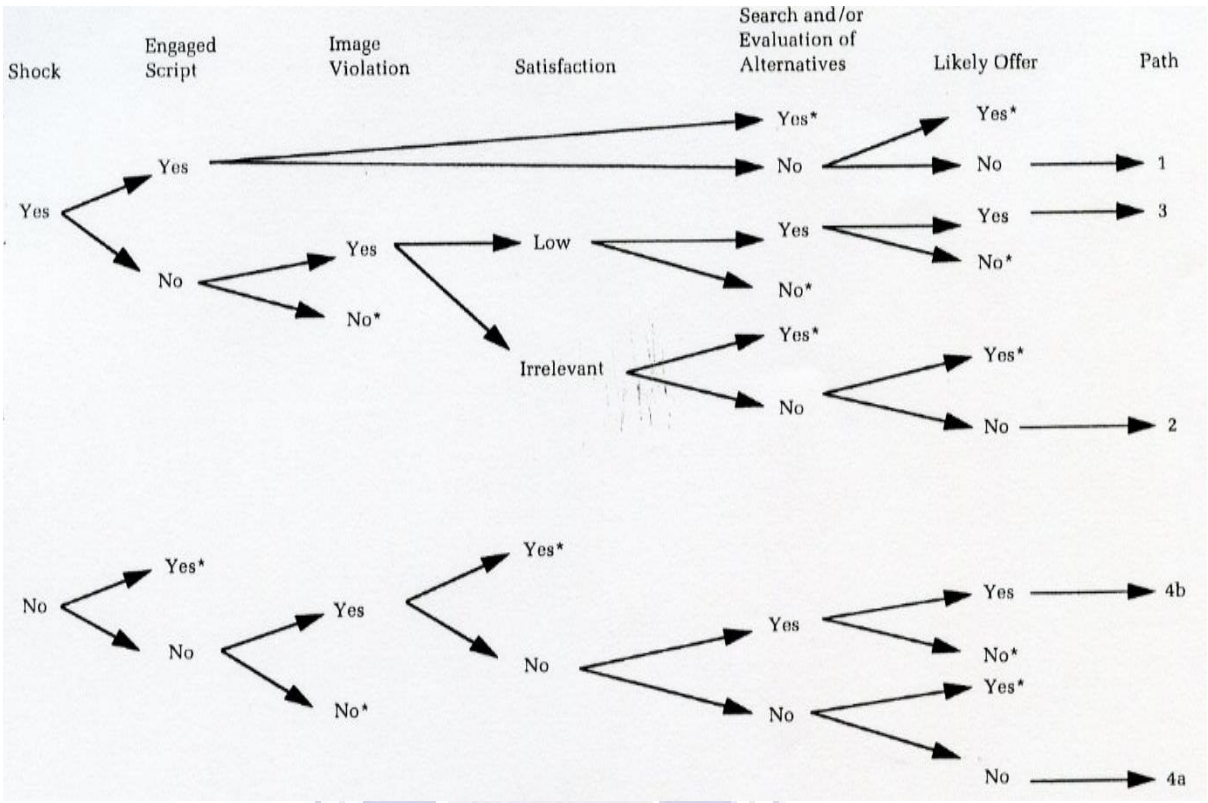


Figure 2.9: The different paths of the unfolding model of voluntary turnover and the role played by the script, image violation, satisfaction, evaluation of alternatives and the presence/absence of likely offer. Adapted from "The unfolding model of voluntary turnover: A replication and extension" by T.W. Lee, B.C. Holtom, L.S. MacDaniel & J.W. Hill, 1999. *Academy of Management Journal, 42*(4) p. 451. Copyright 1999 by Academy of Management.

- *Satisfaction* – according to Lee *et al*. (1999) low job satisfaction is perceived when the job no longer provides employees with intellectual and emotional stimulation as well as financial benefits they had expected or desired. The interaction of these components interface to ultimately determine whether an individual proceeds to *search for alternatives* or not, as depicted in Figure 2.9.

Lee and Mitchell's (1994) five decision paths that may be followed by individuals when making a quitting decision are as follows:

Decision path 1: The quitting process in this path is instigated by the occurrence of a jarring, shocking event that invokes the consideration of a pre-existing plan or the engaged script.

Image violation regarding the incompatibility of one's goals, values and/or strategies and job satisfaction is either immaterial, or is not considered. Neither is the search and/or consideration of alternatives or likely job offers providing incentive for quitting a job. An employee quits the job based on a single incidence, *i.e.* a shock triggering the enactment of a pre-existing action plan.

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Decision path 2: In decision path 2 the quitting process is also triggered by a shock which violates an individual's images, who has no pre-existing plan or engaged script to fall back on. Whether job satisfaction is low or high is immaterial as it has no bearing on the quitting decision. The individual had not searched for alternative employment and has no job offers but quits anyway. The main push factor for quitting in decision path 2 is the violation of an employee's image, resulting in incompatible values, goals and goal strategies as a result of the shock.

Decision path 3: As in decision path 2, in decision path 3 the quitting process is also triggered by a shock which violates an individual's image, who then has no pre-existing plan or engaged script to fall back on. Unlike in path 2 where job satisfaction is irrelevant, in path 3 an individual experiencing low job satisfaction is actively searching for alternative employment and evaluating alternatives. The individual is likely to get a job offer before putting the quitting decision in action.

Decision path 4a and 4b: Unlike decision paths 1, 2 and 3 in which the quitting process is initiated by a shock, in decision path 4 there is neither a shock nor pre-existing plan on the side of the potential quitter. However, perceptions of incongruence between an organisation and individual values, goals and goal strategies result in low job satisfaction. Decision path 4a is characterised by lack of searching for alternatives and non-existence of job offers, yet the individual quits anyway. Decision path 4b is characterised by active job search and evaluation of alternatives with a likelihood of a job offer before an employee makes a quitting decision.

In research on a sample of accountants, Donnely and Quirin (2006) empirically validated an extended version of Lee and Mitchell's (1994) model by including economic consequences and gender differences over and above the model's original process factors of a shock, the engaged script, image violation, satisfaction, search and evaluation of alternatives and the presence/absence of a likely job offer. The results indicated that the revised model was able to correctly classify as much as 91% percent of the quitters and correctly classified 79% of the

stayers through the application of Lee and Mitchell's decision paths. Furthermore, the results confirmed the importance of economic factors in influencing a quitting decision. They also confirmed that women, probably as a result of their traditional gender roles are more likely to experience shocks than men. Donnely and Quirin's (2006) study provided evidence for generalisability of Lee and Mitchell's (1994) model and its four decision paths.

Lee *et al.* (1994) contend that the model is falsifiable as indicated by paths with asterisks in Figure 2.9. This means that there could be factors other than shocks, engaged scripts, and/or image violations that could be responsible for initiating the judgment of one's job, which could make employees to be aware of the levels of job dis/satisfaction, invoking intentions to quit. The model does little to explore the role of push factors like personality and/or cultural value dimensions, excluding job satisfaction, but it does portray individuals as predominantly reacting to pull factors.

2.9 CONTEMPORARY TURNOVER INTENTION MODELS

Recent empirical studies depicting diverse employee turnover intentions and/or behaviour models have been conducted in different environments and organisational contexts. For example, Ariyabuddhiphongs and Kahn (2017) investigated the effect of transformational leadership on turnover intention and the mediating effect of trust and job performance on this relationship among café employees in Thailand, as illustrated in Figure 2.1. The results demonstrated that turnover intention was indeed significantly negatively correlated to transformational leadership ($r = -.51$; $p < .001$), trust ($r = -.45$; $p < .001$) and job performance (-.46; $p < .001$). These results were interpreted to mean that if leaders adopt and practice a transformational leadership style, create trust between themselves and their subordinates and empower employees to improve their performance, turnover intention would be reduced and talent retention would substantially improve in organisations. Further regression model analysis results indicated that transformational leadership significantly negatively predicted turnover intention; job performance significantly negatively predicted turnover intention; trust negatively mediated the effect of transformational leadership on turnover intention, and job performance significantly negatively mediated the relationship between transformational leadership and turnover intention. According to Ariyabuddhiphongs and Kahn (2017), the results of this study confirm that immediate managers/supervisors are the best predictors of turnover intention since their support determines whether employees stay or leave an organisation.

Figure 2.10 Ariyabuddhiphongs and Kahn's (2017) transformational leadership-turnover intention model

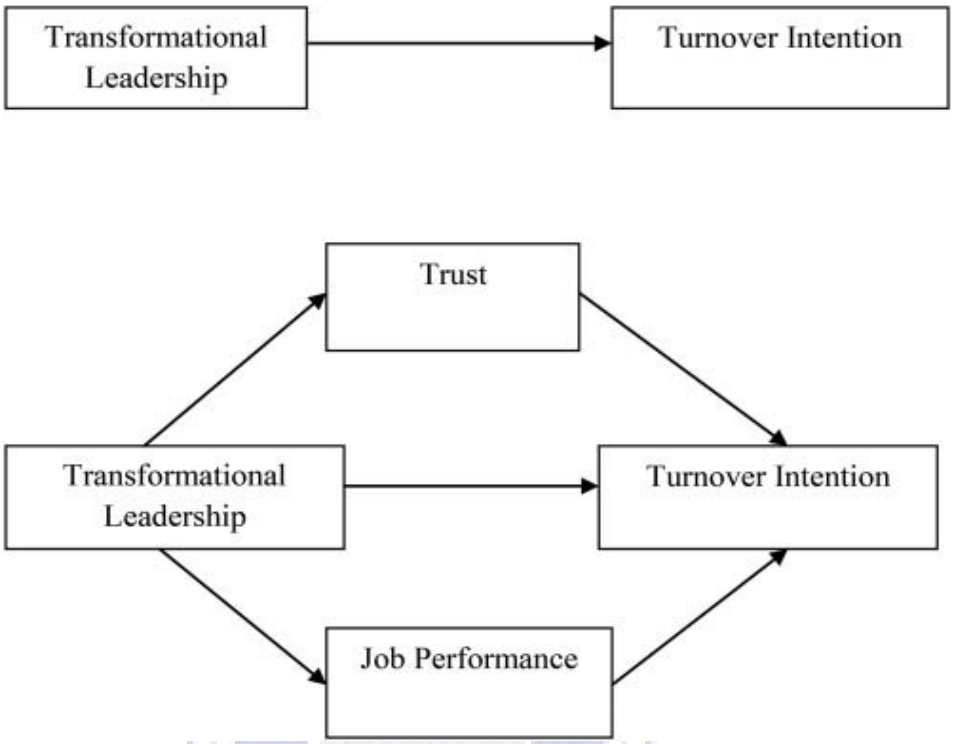


Figure 2.11: Relationship between transformational leadership and turnover intention and the mediating effect of trust and job performance. Adapted from "Transformational leadership and turnover intention: The mediating effects of trust and job performance on café employees in Thailand" by V. Ariyabuddhiphongs, & S.I. Khan, 2017. *Journal of Human Resources in Hospitality & Tourism,* 16(2), p. 22. Copyright 2017 by Taylor & Francis Group, LLC

Bufquin, DiPietro, Orlowski and Partlow (2017) investigated the influence of co-workers' warmth, co-workers 'competence, job satisfaction, organisational commitment and turnover intentions (as indicated in Figure 2.11) in the hospitality sector in the United States. The multilevel path analysis results demonstrated that co-worker's warmth has a statistically significant positive effect on job satisfaction ($\gamma = .26$; $p < .001$) but nonsignificant positive effect on organisational commitment ($\gamma = .08$; $p > .05$). Furthermore, the path analysis results indicated that perceived co-worker' competence has a statistically significant positive effect on job satisfaction ($\gamma = .45$; $p < .001$) but nonsignificant effect on organisational commitment ($\gamma = .08$; $p > .05$); both job satisfaction ($\beta = .17$; $p < .001$) and organisational commitment ($\beta =$

.50; p < .001) have negative statistically significant effects on turnover intentions. Job satisfaction was found to positively and significantly predict organisational commitment (β = .66; p < .001). Furthermore, *post hoc* mediation results indicated that job satisfaction significantly mediated the effect of both co-workers' warmth and co-workers' perceived competence on turnover intentions. The results of this study highlights the mediation effects of job satisfaction and organisational commitment in the relationship between some social variables and turnover intentions.

Figure 2.11 Bufquin, DiPietro, Orlowski and Partlow's (2017) fitted turnover intention model

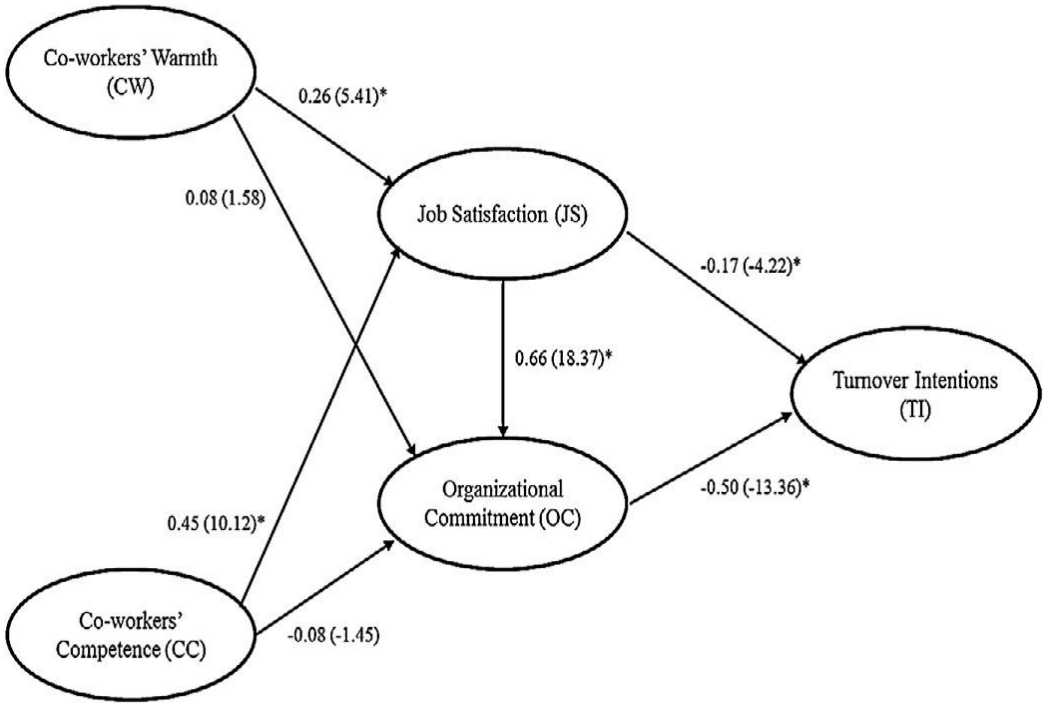


Figure 2.11: The mediating effect of job satisfaction and organisational commitment in the relationship between co-workers' warmth and co-workers' competence and turnover intention. Adapted from "The influence of restaurant co-workers' perceived warmth and competence on employees' turnover intentions: The mediating role of job attitudes" by D. Bufquin, R. DiPietro, M. Orlowski & C. Partlow, 2017. *International Journal of Hospitality Management, 60*, p. 17. Copyright 2017 by Elsevier Ltd.

Sampling manufacturing sector workers in Pakistan, Adil and Awais (2016), investigated the effect of leader-member exchange (LMX), interpersonal relationship, individual feelings of energy, and creative work involvement on turnover intention. The results indicated that interpersonal relationship has a positive significant effect on turnover intention while LMX was found to have a negative significant effect on turnover intention. The positive relationship between interpersonal relationships and turnover intentions is attributed to the possibility that interpersonal relationships could be associated with a wider social network and increased knowledge of better opportunities elsewhere, while high LMX relationships between the leader and his followers are associated with less intentions to leave an organisation. High-quality LMX leaders seem to strive to eradicate power distance between themselves and their followers, leading to mutual positive feelings and job satisfaction (Adil & Awais, 2016). The results of this study underscores the important role of social relations on turnover intentions.

Furthermore, Akhtar, Awan, Anwar, Saeed, Ali and Qurban (2016) explored the impact of job satisfaction and remuneration on turnover intention among faculty members at a business school in Pakistan. Correlation analysis results indicated that turnover intention was negatively and significantly correlated to both job satisfaction (-.904; $p < .01$) and remuneration ($r = -.899$) while job satisfaction and remuneration were positively, significantly and highly related. The most important contribution of the results of the study is that even though some employees may be highly satisfied and are remunerated well, turnover intentions may still be high (Akhtar, et al. 2016).

Abbasi (2015) studied the effect of workload on stress, job satisfaction and turnover intentions and the possible intervening/ effect of Islamic Work Ethics through a sample of public sector healthcare employees in Pakistan. The correlation results indicated that turnover intention was significantly and negatively related to job satisfaction ($r = -.216$; $p < .01$), insignificantly but negatively correlated to both Islamic Work Ethic ($r = .06$; $p > .05$) and work overload ($r = .06$; $p > .11$) and positively and insignificantly related to stress ($r = .05$; $p > .05$). This study confirmed the role of job satisfaction, Work Ethic and work overload on turnover intention but failed to establish the moderating effect of Islamic Work Ethic in the relationship between both work overload and job satisfaction and the outcome variable of turnover intentions.

Chandio, Jhatial and Mallah (2014) developed and tested a model by means of an empirical study through a sample of IT and banking professionals which depicted the effect of career

development, job satisfaction and job stress on turnover intention. The results indicated that satisfied employees experience less stress at work and are less likely to quit, but unclear career development plans tend to generate job dissatisfaction which is likely to increase stress, dissatisfaction and turnover intentions. On the basis of these results, Chandio *et al.* (2014) argued that to retain valued employees, organisations should provide clear career development plans, training and promotions which would generate job satisfaction and reduce job stress and intention to quit.

Gilles, Burnand and Peytremann-Bridevaux (2014) investigated the impact of manager characteristics, workload, career opportunities, working conditions, work organization, co-worker support, self-fulfilment, occupational burnout, institutional identification and job satisfaction on intent to stay (as illustrated in Figure 2.12) across five healthcare occupational categories. The results indicated that for all professional categories, self-fulfilment increased intent to stay ($\beta > .14$, $P < .05$), burnout decreased intent to stay by weakening job satisfaction ($\beta < -.23$ and $\beta > .22$, $P < .05$); workload was associated with nurses' intent to stay ($\beta = -.15$), and physicians' institutional identification mitigated the effect of burnout on intent to stay ($\beta = -.15$ and $\beta = .19$). Once more, the results of this study highlighted the role of job satisfaction on turnover intentions.

Furthermore, through a sample of law enforcement officers in the UK, Allisey, Noblet, Lamontagne and Houdmont (2014) investigated the effect of job demand, autonomy, manager's support, peer support, work relations, role clarity and change management on turnover intention, and the mediating effect of job stress and job satisfaction on the relationship between these variables. Correlation analysis results indicated that higher workplace demands and lower role clarity were associated with dissatisfaction and higher job stress and then intention to leave. In addition, the results indicated that managerial and peer support, workplace relations and change management were positively and significantly associated with job satisfaction but to be negatively and significantly related to job stress and intention to leave. Further results also indicated that job stress and job satisfaction are significant mediators of the effect of job demands, quality of workplace relationships and role clarity and the outcome variable of intention to leave.

Figure 2.12. Gilles, Burnand and Peytremann-Bridevaux's (2014) turnover model

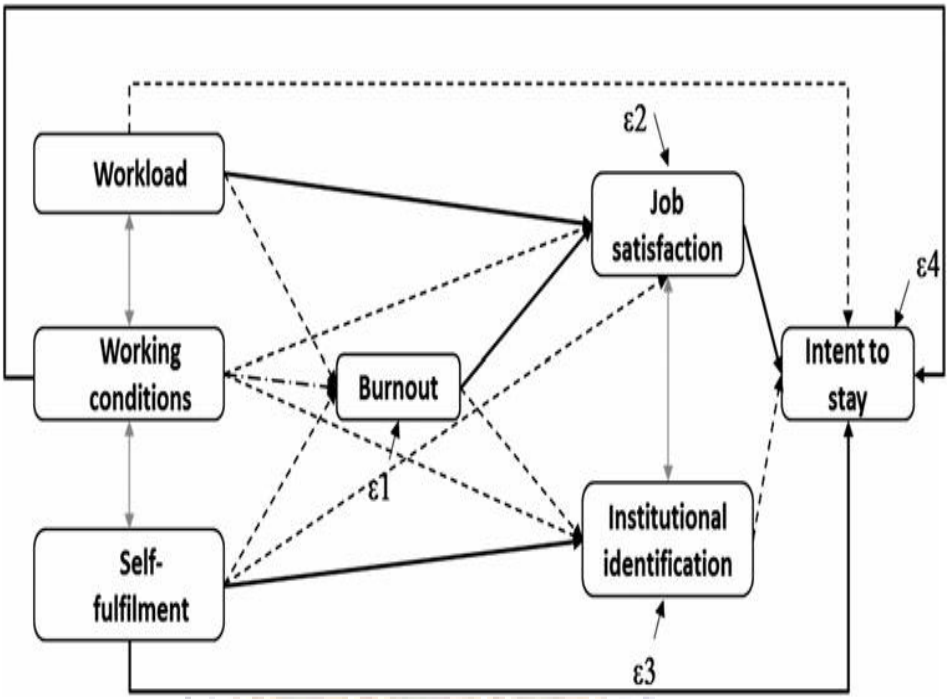


Figure 2.12: The mediating effect of job satisfaction, burnout and institutional identification model on the relationship between workload, working conditions, self-fulfilment and turnover intention. Adapted from "Factors associated with healthcare professionals' intent to stay in hospital: a comparison across five occupational categories" by I. Gilles, B. Burnand, & I. Peytremann-Bridevaux, 2014. *International journal for quality in health care*, *26*(2), p. 162. Copyright 2014 by Oxford University Press.

The important contribution of Gilles *et al*. s' (2014) study is its highlighting the socio-relational working conditions in determining job satisfaction and negative attitudes and therefore mediate and influence turnover intentions (Allisey *et al*. 2014). The next section is reviewing recent studies and/or models of turnover intentions in the South African organisational context.

2.10 CONTEMPORARY TURNOVER INTENTION MODELS/STUDIES IN SOUTH AFRICA

The need for a better understanding of the work-outcome variable of employee turnover and its primary, immediate predecessor of turnover intention is evident in a number of contemporary studies that have been conducted in South African organisational context. For example, Grobler and Grobler (2016) investigated the dynamic nature of the relationships

between person-organisation fit, the psychological contract and intention to quit as precursors of voluntary turnover in 32-South African State-Owned Enterprises. The results demonstrate that organisation fit (conceptualised as values congruence) and direct fit (conceptualised as needs-supply fit) cumulatively explained 30% of the variance in turnover intention, while psychological contract adherence explained 3% of variance in turnover intention; the whole model explained 33% of variance in turnover intention. The results of the study highlight the primary role of intention to leave as a primary precursor of actual turnover behaviour (Grobler & Grobler, 2016).

Ronnie (2016) conducted a study to investigate the effect of age and race as independent variables on turnover intention, which was treated as a dependent/outcome variable, and the mediating role of psychological contract type and organisational commitment dimension in a sample of public sector employees in the Western Cape, South Africa. Psychological contract type was conceptualised in terms of transactional type, based on rewards and monetary gains, relational type based on socio-psychological fulfilments, and the balanced psychological contract, a hybrid between economic, monetary rewards and relational factors (Ronnie (2016) The group comparison analysis results revealed a positive relationship between transactional psychological contract and turnover intention among Coloureds and Whites; relational psychological contract was found to be positively related to both affective and normative commitment but inversely related to turnover intention across gender and race, while relational psychological contract was associated with loyalty and higher intention to remain in the public sector (Ronnie, 2016).

Furthermore, Schlechter, Syce and Bussin (2016) investigated the influence of fourteen different biographical factors on their ability to predict turnover in an insurance organisation operating in South African and Namibia. Factors included performance score and the interaction between the number of dependants and years of service and cost centre bands (departments). The results demonstrated that amongst the fourteen biographical variables tested, age, years of service, cost centre, performance score and the interaction between the number of dependents and years of service all have statistically significant predictive value on turnover. These results highlighted the possibility of using readily available information, such as biographical variables to predict turnover and identify workers at risk of leaving and therefore develop interventions accordingly.

Coetzee, Schreuder and Clinton-Baker (2015) investigated the relationship between career anchors, organisational commitment and turnover intention in a retail sector organisation in South Africa. Career anchors were conceptualised in terms of an individual's career-related self-concepts, motives, values, needs and abilities and were differentiated into entrepreneurial creatively-anchored types and lifestyle-anchored types. The correlational results revealed negative relationships between turnover intentions and each of affective ($r = -.54$; $p < .01$)), normative ($r = -.43$; $p < .01$) and composite/overall ($r = -.40$; $p < .01$) organisational commitment, but found negative insignificant correlation between turnover intention and continuance ($r = -.01$; $p > .01$) organisational commitment. Furthermore, stepwise regression analysis results found that entrepreneurial career-anchor individuals tend to have low organisational commitment but high turnover intention, while lifestyle-career anchored individuals tend to be inclined to have high organisational commitment and low turnover intentions. Coetzee *et al*., (2015) argued that creative entrepreneurial individuals have a high need for experiencing new challenges, creating their own wealth, independence and power and prestige, which explains their low organisational commitment and high turnover intention. Lifestyle-anchored individuals, in turn, are characterised by a sense of moral commitment and doing what is right; hence their high commitment and low turnover intention.

Snyman, Ferreira and Deas (2015) conducted a survey study to determine the relationship between psychological contract, employment equity legislation practices and intention to leave among open distance higher education institution employees in Gauteng, South Africa. The results indicated that psychological contract is inversely and significantly correlated with intention to leave ($r = -.32$; $p < .05$), and positively but insignificantly correlated with employment equity practices ($r = .08$; $p > .05$). Further group comparison results indicated no significant differences between males and females and educational groups in their intention to leave. White male participants were found to have lower scores of intention to leave than Black male participants, by ANOVA analysis. Multiple regression results indicated that only overall psychological contract negatively and significantly predicted intention to leave. This result was interpreted to mean that higher perceptions of a psychological contract with the organisation are associated with lower turnover intention (Snyman *et al*., 2015).

Delobelle, Rawlinson, Ntuli, Malatsi, Decock and Depoorter (2011) investigated the relationships between biographical variables of age, tenure, education and professional rank, and the work outcomes of job satisfaction and turnover intent among nurses in South Africa.

They found that job satisfaction was negatively and significantly correlated with turnover intention, and that turnover intention among nurses in South Africa was significantly explained by age, education and satisfaction with supervision. The results of this study underscored the important role of job satisfaction and some biographical variables on turnover intention.

Greyling and Stanz (2010) investigated the dynamics associated with the determinants of voluntary employee turnover in the nursing profession in three selected Gauteng hospitals of South Africa. They found that discontent with salaries was a major cause of nurses' leaving, while nursing practices, the work environment, physical and emotional costs and employment opportunities after resignation were the major organisational factors that induced nurse turnover.

Jacobs and Roodt (2008) investigated the role of organisational culture on turnover intentions and the mediating effect of knowledge sharing, organisational commitment, organisational citizenship behaviour and job satisfaction among professional nurses in a South African hospital. The correlation results indicated that organisational culture and turnover intentions were significantly and negatively correlated ($r = -.521$; $p < .01$), interpreted to mean that positive perceptions of organisational culture was associated with lower turnover inclinations on the part of the nurses. The study also found that organisational culture had a positive and significant correlation with organisational commitment ($r = .551$; $p<.001$), knowledge sharing ($r = .404$; $p < .001$), organisational citizenship behaviour ($r = .588$; $p < .001$) and job satisfaction ($r = .688$; $p < .001$). Furthermore, General Linear Model (GLM) results indicated that the interaction between organisational culture and job satisfaction ($B = -.145$) decreased turnover intentions, and organisational commitment emerged to be the most important predictor of negative intentions ($B = -.510$; $p<.000$) (Jacobs & Roodt, 2008).

Pienaar, Sieberhagen and Mostert (2007) investigated the moderating effects of social support from supervisor and from colleagues on the effect of predictor variables on turnover intention (as an outcome variable) in the mining sector. Predictor variables included quantitative and qualitative overload, job satisfaction, social support from supervisor and from colleagues. The theoretical model of the study is illustrated in Figure 2.14. The multiple regression analysis results with turnover intention as an independent variable indicated that quantitative role overload had a significant effect in turnover intention, and job satisfaction was shown to be a robust negative predictor of turnover intention while social support from colleagues proved to

be a significant moderator between qualitative role overload and job satisfaction and turnover intention (Pienaar *et al*. 2007). The results of this study underscore the role of job satisfaction on turnover intention.

Figure 2.13. Pienaar, Sieberhagen, and. Moster's (2007) turnover intention model

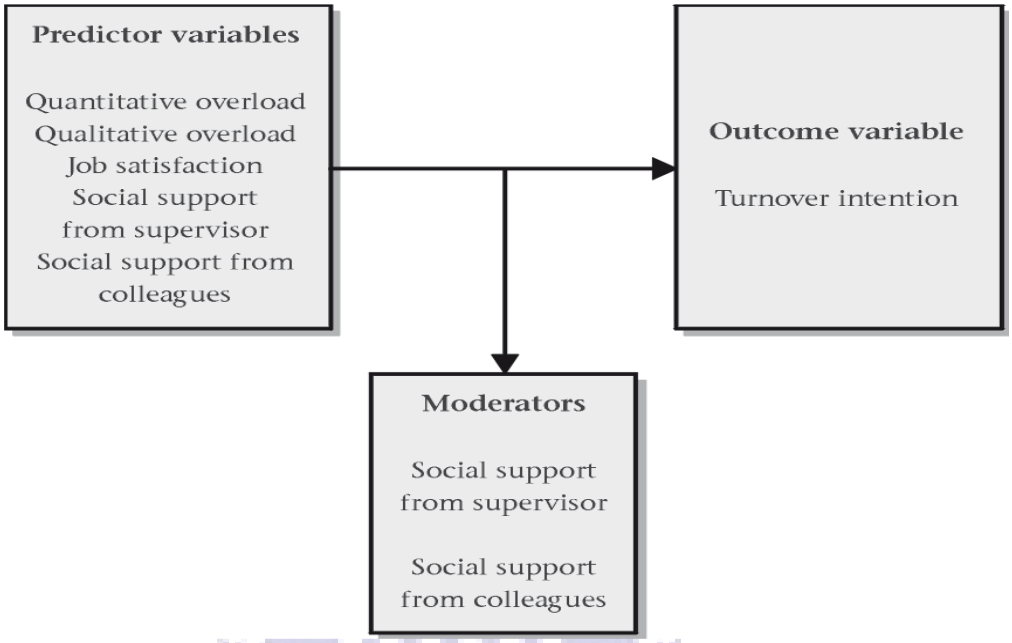


*Figure 2.13*Social support as a moderator variable between role overload, job satisfaction and turnover intention model. Adapted from "Investigating turnover intentions by role overload, job satisfaction and social support moderation" by J. Pienaar C.F. Sieberhagen, & K. Mostert, 2007. *South African Journal of Industrial Psychology, 33*(2), p. 63. Copyright 2007 by AOSIS

It is worth mentioning that the focus of studies on employee turnover intention and behaviour tends to be primarily on health practitioners, especially nurses, less on other sectors in developing countries. Nine studies were briefly reviewed in the current section, three of which were from a South African context focused on health practitioners, thus 33%. This could be a reflection of the turnover challenge faced by the health sector in South Africa. This current study will build on this this assumption by focusing on the turnover intention of health practitioners in a military organisation. The next section conceptualises the constructs of the current study.

2.11 CONCEPTUALISING CONSTRUCTS OF THE STUDY

This study intends to develop and test an employee turnover model that integrates individual static dispositions (Tett, 2002), also referred to as (personal) push factors (Lee & Mitchell, 1999) of Hofstede's cultural value dimensions at individual level that could give further plausible explanations of why some employees make quitting decisions without following one or other theoretical script or path (Hom & Griffeth, 1991, Lee & Mitchell, 1999). The model includes turnover intention as an outcome or a dependent variable, Hofstede's (1980) cultural value dimensions at individual level as independent variables, and the two job-related variables of job satisfaction and organisational commitment, perceived organisational support (POS), perceived supervisory support (PSS) as mediating variables. Further clarification on the relationships amongst these variables is provided in the next sections.

2.11.1 Conceptualising turnover intentions

Ajzen and Fishbein's (1970) theory of reasoned action (TRA) and its extension, the theory of planned behaviour (TPB) provided the basis for explaining the effect of intention on behaviour as well as the attitude-intention-behaviour link. On the one hand, regarded as a fundamentally motivational approach to explaining human behaviour, TRA contends that the immediate antecedent of any human behaviour, considered to be volitionally controlled by the actor, is the intention to cause the behaviour in question, which in turn is determined by the attitude toward and the subjective norm associated with that behaviour (Madden *et al*., 1992). Volitional control entails that the individual has complete control of the behaviour. On the other hand, TPB affirms the assertions of the TRA, but acknowledges the role of perceived behavioural control on top of intentions, attitudes and subjective norms in determining behaviour (Ajzen, 1991). These theories have been used as the basis for most turnover theories.

The core theories of Mobley (1977) and Mobley *et al*. (1979) as well as a number of studies that sought to validate these core theories (Hom *et al*., 1984; Hom & Griffeth, 1991; Mobley *et al*., 1978; Mowday *et al*., 1984, Michaels & Spector, 1982; Sager, *et al*., 1998) all established that turnover intention is either the last step prior to the actual quitting behaviour, or is the immediate determinant of quitting behaviour, a direct antecedent of job separation or the most immediate and accurate predictor or precursor of turnover. These core theories and their subsequent validation studies incorporated both turnover intention and turnover behaviour in their theorisations. Further evidence of the important role of turnover intention on turnover decision and behaviour has also been presented in other studies outside the "core" theories

realm (e.g. van Breukelen, Vlist, & Steensma, 2004; Firth, Mellor, Moore & Loquet, 2004; Jaros, 1997; Martin, 1979; Martin & Shore, 1989; Parasuraman, 1982; Steel, 2002; Winterton, 2004). There is a plethora of evidence to establish the influence of turnover intention on actual turnover behaviour (Barak, 2006).

Cho, Johanson and Guchait (2009) argue that intent to leave and intent to stay are two sides of the same coin and define intent to leave as the subjective estimation of an individual regarding the probability of leaving an organisation in the near future. Tett and Meyer (1993) refer to turnover intention as a conscious and deliberate willfulness to leave the organisation. Jaros (1997, p. 321) defines turnover intention as "a more enduring, general tendency or orientation to remain with or leave an organisation". Firth, Mellor, Moore and Loquet (2004) define employee turnover in terms of thinking about quitting a job. Tett and Meyer (1993, p. 262) define turnover intention as "a conscious and deliberate wilfulness to leave an organisation". Parasuraman (1982) defines turnover intention as an individual's perceived probability of either staying or terminating employment in the organisation, a reflection of that individual's motivation to either stay or leave. The common emphasis of these definitions is the issue of contemplating an action of turnover which is not yet activated.

An approach that underscores the significance of turnover intention in the turnover process is evident in theory and research that characterise turnover intention as a dependent/outcome variable instead of the actual turnover behaviour (Allen, Griffeth, Vardaman, Aquino, Gaertner & Lee, 2010; Aryee, Wyatt & Min, 1991; Janssen, de Jonge & Baker, 1999; Jaros, 1997; Jha, 2009; MacIntosh & Doherty, 2010; Martin 1979; Martin & Shore, 1989; Mustapha *et al*., 2010). This approach is in line with Ajzen and Fishbein's (1977) assertion that intention is the best predictor of behaviour. Based on this assertion turnover intention has been adopted as the primary outcome or dependent or endogenous variable of this current study. The next section examines the dispositional factors that are related to turnover intentions.

2.11.2 Conceptualising cultural value dimensions

Organisational culture has been shown to have an impact on job satisfaction and organisational commitment (Lok & Crawford, 2004; Rashid, Sambasivan & Johari, 2001), on perceptions of fit in the job, organisation or part of the organisation (O'Reilly, Chatman & Caldwell, 1991; Sheridan, 1992) and on turnover behaviour and overall company performance (MacIntosh & Doherty, 2010). In fact, Soares, Farhangmehr and Shoham (2007) argue that the pervasiveness

of culture in influencing many dimensions of human behaviour makes it difficult to define the concept of culture.

One of the earliest definitions of culture by Schein (1988, p. 7) refers to it as "a pattern of basic assumptions, invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration, that has worked well enough to be considered valid and therefore is to be taught to new members as the correct way to perceive, think, and feel in relation to those problems". This definition acknowledges the group origins of culture as well as its role in determining individual psychological processes of perception, affection and cognition. Hofstede (1980, p. 43) defined culture as "the collective mental programming of the people in an environment". This definition further emphasises the group/collective nature of culture and how it determines people's cognitions through psychological programming effect.

Culture has been conceptualised in terms of national/ecological (Hofstede, 1980; Schwartz, 1999), organisational (Schein, 1990; Sheridan, 1992) and more recently from individual (Patterson, Cowley & Prasongsukarn, 2006; Prasongsukarn, 2009; Yoo *et al*., 2011) levels. The national/ecological level approach has been criticised for its ecological fallacy, which is an inclination to look for and analyse aggregate national tendencies, behaviours and outcomes at the expense of understanding the underlying psychological phenomenon of individuals (Mobley, *et al*., 1979). The approach allegedly also misleads by equating the stereotypical culture of a country with all citizens (Yoo *et al*., 2011). The concept of organisational culture has provided the field of organisational theory with the tool for analysing and understanding organisational characteristics, structures, processes and/or effectiveness (Allaire & Firsirotu, 1984). The psychological or individual approach to culture is a new, recent development that has a purpose of addressing the shortcomings of the ecological approach (Yoo *et al*., 2011).

Vandenberghe (1999) argued that cultural dimensions could be captured by behavioural norms and expectations, perceived practices and/or values. Culture cannot be simplistically conceptualised. According to Matsumoto and Juang (2017), culture could be conceptualised in terms of dynamic externality and societal cynicism as in Leung and Bond's social axioms of belief system; in terms of embeddedness, hierarchy, mastery, intellectual autonomy, affective autonomy, egalitarianism and harmony in Schwartz' s (1999) value dimensions; in terms of Collectivism-Individualism, power distance, uncertainty avoidance, femininity-masculinity,

long/short-term orientation in Hofstede's value dimensions or in terms of internality-externality, control-flexibility and means-ends in Quinn and Rohrbaugh's value dimensions (Yu & Wu, 2009).

Although not immune to criticism, such as that by Tett (2002), for its persistent ecological fallacy, Hofstede's (1980) renowned five-dimensional value framework/measure/conceptualisation is regarded as the overwhelmingly dominant metric of culture (Yoo *et al*., 2011). It was popularised by its many merits, including its comprehensiveness and ability to show meaningful relationships with important demographic, geographic, economic and political indicators of a society; empirical support based on replications in different societies; widespread and frequent citation in social scientific studies as the most important and practical theory of culture types with evidence of huge benefits regarding its applicability in cross-cultural and international studies and in explaining cross-cultural behaviour (Prasongsukarn, 2009). Furthermore, Tang and Koveos (2008) contend that Hofstede's cultural value framework has arguably the greatest impact of all cultural frameworks because of its clarity, parsimony and resonance with managers.

Traditionally used in ecological studies, Hofstede's framework has recently been utilised to measure culture at individual level (Yoo *et al*., 2011). Hofstede (1980; 2001) defines the cultural dimensions as follows:

- ***Collectivism (versus Individualism)*** **–** the degree to which societies and individuals exhibit an orientation to a tight social framework which is evident through in-group and out-group distinctions and associations. Individualism, conversely, is the degree to which societies and/or individuals are expected to look after themselves and their immediate families, and which is characterised by loose interrelations amongst individuals. In collectivist cultures individuals are expected to sacrifice their personal goals for the sake of the group, are more compliant and conforming to policies and collective behavioural norms, engage in behaviour that ensures harmony and individual initiative, and is frowned upon when loyalty is promoted as virtue (Matsumoto & Juang, 2017). Collectivism reinforces teamwork in the military. A study by Soeters (1997) found evidence that military practitioners tend to be more collectivist than their civilian counterparts.

- ***Power distance*** – the degree to which the idea of unequal distribution of power in a society is regarded as inevitable, ideal, normal, expected, accepted and is endorsed by both followers and leaders. High power distance in organisations and societies is characterised by high status differences, much fewer people in higher status levels than people in lower levels, decreased interaction between superiors and subordinates, decreased entitlements and benefits usually associated with power, greater centralisation of power and a lack of trust between the powerful others and subordinates (Hofstede, 1980). Generally, the relationship between subordinates and superiors could be characterised as adverse and unpleasant. Differences power distance orientations have implications for value preferences, organisational behaviours as well as organisational outcomes. High power distance is also associated with obedience and benevolence where subordinates expect to be told what to do without consultation or asking questions. A study by Soeters (1997) found evidence that military practitioners tended to measure higher on power distance than their civilian counterparts. This could be explained by the nature of socialisation in militaries which emphasises respect for and obedience to rank and unqualified loyalty to the organisation, as inculcated through respective military codes of conduct for SANDF employees.

- ***Uncertainty avoidance*** **–** the degree to which cultures or individuals avoid confusion, uncertainty and ambiguity by establishing and prescribing formal rules and guidelines, and instil non-tolerance of deviance from the norm (Hofstede, 1980). High uncertainty avoidance cultures are characterised by high level of stress and anxiety resulting from the need to do things according to relatively fixed ways and expectations. In organisations high uncertainty avoidance is associated with a "time is money" mentality and an urge for hard work, detestation of deviant individuals and behaviour and a great concern for security in life (Hofstede, 1980). Uncertainty avoidance is well represented and established in the bureaucratic culture of militaries. A study by Soeters (1997) found evidence that military practitioners tended to be higher in uncertainty avoidance than their civilian counterparts.

- ***Masculinity*** **(*versus Femininity*)** – masculinity is defined as the degree to which cultures or individuals value assertiveness, accumulation of materialistic things and money instead of people, relationships and quality of life (Hofstede, 1980). Femininity

is associated with modesty, caring, equality between sexes, interdependence, and a relaxed, easy way of being as compared to masculine cultures which value arrogance and competition, superiority and dominance of males over females. Achievement is the most approved and valued virtue in masculine cultures. A study by Soeters (1997) found evidence that military practitioners tended to be higher on masculine orientations than their civilian counterparts.

- ***Long-term orientation (or Confucian dynamism)*** – this fifth dimension was a late addition to the framework after observations that Asian cultures seemed to have this dimension as an additional dominant value (Matsumoto & Juang, 2017). Long-term orientation is defined as the degree to which cultures or individuals value thrift instead of spending, virtues of planning for the long-term instead of living for the "here and now", tradition, hard work and perseverance (Bearden, Money & Nevins, 2006). Long-term-oriented cultures value humility, building relationships and coordination. A study by Soeters (1989) found that military practitioners tended to be more long-term oriented when compared to civilian members.

The role of individual values in the employee turnover process is evident in Mobley *et al*.'s (1977) model, in which individual values are said to be determined by personal factors and in turn determine job satisfaction, and utility of search. Steel's (2002) model also acknowledges the role of culture through inclusion of subjective norms in the turnover process model. Abrams, Ando and Hinkle (1998) focused on the role of subjective norms on turnover intentions. Norms reflect what is important in a culture (Matsumoto & Juang, 2017). Sheridan (1992) contends that culture could influence retention through cultivation of organisational loyalty and commitment.

Culture has been associated with turnover through the phenomenon of person-culture/person-organisation fit (Kristoff, 1996; O'Reilly, Chattman & Caldwell, 1991; Vandenberghe, 1999). In fact, O'Reilly *et al*. (1991) argue that employees who share high value congruence with those of an organisation are likely to stay longer in an organisation. The description of the specific individual paths dealing with this proposition follows.

2.11.3 Conceptualising work-related attitudes outcomes

Attitudes have long been regarded as one of the primary determinants of behaviour. Champoux (2006) argues that there is a presumed connection between attitudes and people's perceptions of their world and their behaviour. Like personality and values, attitudes are regarded as another type of individual differences or dispositions that directly or indirectly affect an individual's behaviour in organisations (Slocum & Hellriegel, 2011) and have been associated with positive and desirable behaviours like job performance (Kappagoga, Othman & De Alwis, 2013), loyalty, organisational citizenship behaviours (OCBs) and staying behaviour (Quick & Nelson, 2011).

Champoux (2006, p. 105) defines an attitude as "a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object". According to this definition, an attitude is learned or socially/culturally constructed and is an individual disposition or inclination to behave in a given manner. Slocum and Hellriegel (2011) define attitudes in terms of relative stability in how individuals feel, think and intend to behave toward specific people or events. This definition suggests that attitudes consist of three elements, *i.e.* affective, cognitive and behavioural elements. The affective component is that part of an attitude that is associated with how an individual feels about a person or an object; the cognition component refers to the thinking/cognition associated with an attitude while the behavioural intentions refer to how an individual intends to act/behave toward an object (Champoux, 2006).

The attitude-behaviour relationship is also well conceptualised, formulated and established in Ajzen and associates' theories of reasoned action (TRA) and planned behaviour (TPB) (Ajzen, 1977; 1987, Ajzen & Fishbein, 1977; Ajzen & Madden, 1986). According to these theories, the effect of attitudes on behaviour is mediated by intention to cause that behaviour. These theories reckon that the attitude toward a behaviour determines the intention to perform a behaviour, which in turn determines the enactment of the actual behaviour. Put yet differently, the attitude towards the behaviour/object initiates the process that will lead to the actual behaviour.

Though other work-related attitudes exist, job satisfaction and organisational commitment are the two attitudes that have been most studied and researched, and are of greatest interest to managers and human resources practitioners (Quick & Nelson, 2011). Referred to as affect by Steel (2002) and also referred to as work-outcomes (Parker, Baltes, Young, Huff, Altmann,

Lacost & Roberts, 2003), job satisfaction and organisational commitment are regarded as interrelated (Winterton, 2004) or as correlated (Spagnoli & Caetano, 2012: Spagnoli, Caetano, & Santos, 2012). Furthermore, Winterton (2004) argues that there appears to be a relationship between both job satisfaction and organisational commitment and value congruence, implying that individuals are attracted to organisations based on value congruence. High congruence of fit is associated with intent to stay with an organisation. Job satisfaction and organisational commitment are examined next.

2.11.3.1 Conceptualising Job satisfaction

Job satisfaction is regarded as the most important and enduring work-related attitude (Slocum & Hellriegel, 2011) and has been associated with numerous positive work outcomes like motivation, achievement, efficiency and effectiveness of organisations, employee happiness and success, increased loyalty, decreased absenteeism and number of accidents (Aziri, 2011), job involvement, stress, employee attendance and turnover (Macdonald & MacIntyre, 1997; Slocum & Hellriegel, 2011). A satisfied employee is expected to put more effort in his/her work and display positive and desirable behaviours, and *vice versa*. The importance of job satisfaction cannot be underestimated.

Various definitions of job satisfaction have been suggested in literature. Job satisfaction has been defined as reflecting the extent to which individuals find fulfilment in their work (Slocum & Hellriegel, 2011); as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences (Quick & Nelson, 2011); as a feeling that appears as a result of the perception that the job enables the material and psychological needs (Aziri; 2011); as a positive emotional state resulting from the appraisal of one's job or job experiences (Saari & Judge, 2004) or as primary affective responses or reactions, or attachment an employee has to his/her job (Parasuraman, 1982). Furthermore, Noe, Hollenbeck, Gerhart and Wright (2012:458) define job satisfaction as "a pleasurable feeling that results from the perception that one's job fulfils or allows for the fulfilment of one's important job values". Job satisfaction is associated with positive feelings one has for his/her job.

Research and theory have conceptualised job satisfaction either in terms of its entirety, referred to as a global view/approach or in terms of various aspects or facets of the job (Parasuraman, 1982; Tett & Meyer, 1993). The global approach views job satisfaction as a general feeling about one's entire job, whereas the facets approach views satisfaction in terms of various

aspects of a job, like supervision, pay, benefits, promotion, working conditions, job experiences and so on that may not necessarily be related. For example, an employee may be satisfied with supervision but not necessarily be satisfied with benefits.

Most conceptual models of employee voluntary turnover assume that job dissatisfaction is the root cause of turnover intentions and the subsequent turnover behaviour, with considerable evidence supporting this position (Winterton, 2004). For example, Mobley's (1977) heuristic/interlinkages model and the subsequent studies that either validated or tried to replicate this model (e.g. Michaels & Spector, 1989) use job satisfaction as the initial step in the cognitive process that culminates in intention to quit and the actual turnover behaviour. Lee and Mitchell (1996) portrayed job dissatisfaction as a primary push factor that stimulates and initiates the employee turnover process. Tett (2002) argued that job satisfaction is a static personal disposition that determines turnover intention and behaviour.

Evidence of the effect of job satisfaction on turnover intentions and behaviour has also been reported elsewhere. For example, Zimmerman and Darnold (2008) showed that job satisfaction mediates the relationship between job performance and quitting intentions. Jha (2009) argued that job satisfaction mediates the relationship between individual factors like skill, ability, personality, cognitive abilities, etc. and organisational factors like supervisory support and turnover intentions. A study by Martin (1979) found that job satisfaction had the highest effect on turnover intentions and mediated the effect of routinisation, instrumental communication, distributive justice, opportunity, gender and age, and turnover intentions. These studies further demonstrated the immediacy of job satisfaction in determining turnover intentions.

2.11.3.2 Conceptualising Organisational Commitment

The impact of organisational commitment on organisational behaviour is well established. For example, committed employees are the most motivated employees in terms of performance (Mosadeghrad, 2013). Jaros (1997, p. 319) contends that "organisational commitment is an important part of an employee's psychological state because employees who experience high organisational commitment are theorised to engage in many behaviours, such as citizenship activities and high job performance that are believed to be beneficial to the organisation". Furthermore, Noe et al. (2012) consider organisational commitment to be a consequence of job dissatisfaction and define it as the degree to which an employee identifies with the organisation and is willing to put forth an extra effort for its benefit. Jaramillo, Mulki and Marshall (2003)

reported a link between job satisfaction, job performance and organisational commitment. Kirkman and Shapiro (2001) content that highly committed employees are less likely to experience stress, are more likely to perform well and behave pro-socially, and more importantly, are less likely to intend leaving or to actually leave. Defining organisational commitment as the desire of an employee to remain a member of the organisation, Coetzee and Schreuder (2013) contend that it determines dedication and the willingness of an employee to stay a member of the organisation. Organisational commitment has been associated with extra-role behaviours, absenteeism and turnover (Wasti, 2003).

Numerous definitions of organisational commitment have been suggested in literature. Organisational commitment has been defined as the relative strength of an individual's identification with and involvement in an organisation (Aryee, Wyatt & Min, 1991; Quick & Nelson, 2011; Slocum & Hellriegel, 2011). Jaros (1997) defined organisational commitment in terms of emotional attachment, obligation to the organisation and costs of leaving the organisation. Rashid, Sambssavan and Johari (2003) defined organisational commitment as employees' willingness to expend their energy, loyalty, and effective attachment to an organisation. From these definitions, it is obvious that organisational commitment is conceptualised as directly related to turnover intention through its characteristic of desire to remain with an organisation.

Organisational commitment has been characterised as consisting of three components, *i.e.* a strong belief in and acceptance of the organisation's goals and values, a willingness to exert considerable effort on behalf of the organisation and a strong desire to maintain membership in the organisation (Coetzee & Schreuder, 2013; Quick & Nelson, 2011). Expanding on this framework, Allen and Meyer (1990) conceptualised organisational commitment in terms of three types, namely continuance commitment associated with the feeling that quitting the organisation could be costly; affective commitment associated with emotional attachment to the organisation, and normative commitment associated with a feeling of obligation to the organisation. Organisational commitment is obviously closely associated with continued membership and has a negative association with quitting intentions or behaviour.

The effect of organisational commitment on turnover intentions has been shown in previous sections of this chapter. For example, organisational commitment is a feature of Mobley's (1977) heuristic employee turnover model as well as Steel's (2002) employee turnover model.

Organisational commitment is also featured in Winterton's (2004) employee turnover model. Also, the effect of organisational commitment on turnover intentions has been shown in other previous studies (Jaros, 1997; Kirkman & Shapiro, 2001; Tett & Meyer, 1993; Parasuraman, 1982).

2.11.4 Effect of culture on work-related attitudes variables

The effect of culture in general on work-related attitudes variables has been tested in a number of studies (e.g., Jacobs & Roodt, 2008; Lok & Crawford, 2004; MacIntosh & Doherty, 2010). This section reviews the effect of Hofstede's individual cultural value dimensions on job-related attitudes of job satisfaction and organisational commitment.

2.11.4.1 Relationship between Collectivism and Job satisfaction

Since Collectivism is associated with in-group membership, positive relationships with co-workers, social cohesion and group decision making (Matsumoto & Juang, 2017), it is expected that cultural value dimension would be positively associated with job satisfaction. Evidence of the association between Collectivism and job satisfaction has been reported (Hui & Yee, 1999; Kirkman & Shapiro, 2001). In an ecological-level study between Chinese and Hong Kong samples, Hui, Yee and Eastman (2008) reported that collectivistic employees reported significantly higher satisfaction with their pay, promotion, co-worker than their individualist counterparts. Furthermore, Kirkman and Shapiro (2001) reported significant, positive but weak correlation between Collectivism and job satisfaction (r = .22). On the basis of these theoretical and practical observations, the following hypothesis is proposed:

Hypothesis 3

Collectivism significantly and positively affects job satisfaction.

2.11.4.2 Relationship between Collectivism and organisational commitment

Since familial relationship between employee and employer, protectionism, long-term job satisfaction, in return for loyalty, trust and organisational commitment are defining characteristics of collectivistic culture (Parkes & Bochner, 2001), it would be expected that collectivistic individuals will have higher levels of organisational commitment than individualist individuals. Evidence of higher organisational commitment in collectivist cultures contrary to individualist cultures has been reported in previous studies (Hui & Yee, 1999). Furthermore, Kirkman and Shapiro (2001) reported significant, positive but weak correlation

between Collectivism and organisational commitment (r = .23). On the basis of these theoretical and practical observations, the following hypothesis is proposed:

Hypothesis 4

Collectivism significantly and positively affects organisational commitment.

2.11.4.3 Relationship between and Collectivism and Perceived supervisory support

Collectivism in organisational context is associated with the patterns of teamwork and workgroups and the extent of relationships between employees and their supervisors and the organisation (Tuzun & Kalemci, 2011). Collectivists are concerned with relationships and more inclined to form positive relationships with their colleagues and supervisors, with expectations of higher perceptions of supervisory support amongst collectivists as compared to individualists. Viewing themselves as embedded in the social context, with a strong need for social harmony and cohesion and good working relationships, collectivists seek close and intimate relationships not only with their co-workers but with their supervisors too. It would be expected that collectivist employees will have a higher propensity to feel that their supervisors give them support.

An empirical study by Tuzun and Kalemci (2011) found a significant, negative moderate relationship between Individualism, which is on the opposite end of Collectivism, and perceived supervisory support; a result which could be interpreted to infer a positive relationship between Collectivism and PSS. On the basis of the above theoretical and empirical evidence, the following hypothesis is proposed:

Hypothesis 5

Collectivism significantly and positively affects perceived supervisory support.

2.11.4.4 Relationship between and Collectivism and Perceived organisational support

Since collectivism is associated with teamwork orientation, valuing of harmonious relationships and formation of positive relationships with colleagues and supervisors (Tuzun and Kalemci, 2011), collectivistic oriented individuals are expected to foster and harbour positive perceptions of their organisations compared to their individualistic counterparts.

Viewing themselves as embedded in the social context, with a strong need for social harmony, cohesion and good working relationships, collectivists seek close and intimate relationships not only with their co-workers and supervisors but extend that perception to their organisations. It would therefore be expected that collectivist employees will have a higher propensity to feel that their organisations support them. Collectivistic individuals integrate themselves into strong, cohesive in-groups (Lobburi, 2012). The salience of interdependence among collectivistic individuals extends to positive perceptions of organisational support (van Knippenberg, van Prooijen & Sleebos, 2015)

The findings of a study by Lobburi (2012) were consistent with the theory hypothesising that collectivistic cultures foster integration into strong, cohesive in-group units, a behaviour that tends to extend to perceptions about organisations. On the one hand, an ecological study by Gyekye and Haybatollahi could not succeed in establishing significant differences in POS between collectivistic Ghananian and individualistic Finnish samples. On the other hand, at an individual level, although an empirical study by Lam, Liu and Loi (2011) did not succeed in establishing a significant relationship between collectivism and perceived organisational support ($r = -.01$; $p > .05$) among Chinese nurses, a study by van Knippenberg *et al*. (2015) succeeded in establishing a positive significant relationship between collectivism and POS among Dutch governmental employees. On the basis of the above theoretical and empirical evidence, the following hypothesis is proposed:

Hypothesis 6

Collectivism significantly and positively affects perceived organisational support.

2.11.5 Effect of culture on turnover intention

The effect of culture on turnover has been described in the sections above with reference to the work of Jacobs and Roodt (2008), MacIntosh and Rafferty (2010), Vandenberghe (1999) and Wasti (2003). The section below examines the individual specific paths that are represented in the model of this study.

2.11.5.1 Relationship between Collectivism and turnover intention

Collectivism-oriented individuals and cultures rank high on emotional interdependence, reliance on the workgroup/organisation, and job security is salient (Matsumoto & Juang, 2017). Formation of close bonds with group/team members and/or organisational members is

expected amongst collectivist individuals and cultures. Furthermore, collectivist orientation is associated with attachment and loyalty to the workgroup or organisation, and close affiliation, and tendency to have long tenure in an organisation is expected (Ramamoorthy & Flood, 2004). The high level of attachment with the workgroup or organisation that is evident among collectivists and their sense of loyalty to the workgroups/organisations is likely to negatively affect their turnover intention.

Ramesh and Gelfand (2010) characterise relationships in collectivist cultures as intimate, based on sense of belonging, harmony and cooperation, all values associated with intention to stay. Luu and Hattrup (2010) reckon that collectivist individuals should be less likely to leave an organisation or a workgroup because of their moral or affective attachment to the organisation and because of the perceived effects of their behaviour on the well-being of their workgroup. Empirical evidence regarding the relationship between Collectivism and intention to quit and the actual quitting behaviour has been reported. The results of a study by Luu and Hattrup (2010) were consistent with the theory that attachment to the organisation is higher amongst collectivist individuals and is associated with lower turnover intentions. A study by Stuurman, Shao and Katz (2012) found a negative non-significant correlation between Collectivism and turnover behaviour (r = -.016). Walumbwa and Lawler (2003) found negative, relatively moderate and significant correlation coefficients between Collectivism and work withdrawal (r = -.20) and Collectivism and job withdrawal (r = -.24). On the basis of the above theoretical and empirical evidence, the following hypothesis is proposed:

Hypothesis 7

Collectivism significantly and negatively affects turnover intention.

2.11.5.2 Relationship between power distance and turnover intention

Power distance cultures and individuals are high on conformity, submissive, obedience, authoritarian and paternalistic decision making styles and are characterised by subordinates who positively evaluate close supervision and employees who are fearful of disagreeing with supervisors or managers (Matsumoto & Juang, 2017). It would therefore be expected that high power distance individuals would be less likely to be confrontational and would be expected to harbour less turnover intentions. Individuals with these values would be expected not to seek better opportunities and/or employers and to stay with an organisation.

A study by Stuurman *et al*. (2012) found a negative, significant correlation between power distance and turnover (r = -.29), supporting the proposition and expectation that high power distance is expected to be associated with low turnover and turnover intentions. It would then be expected that high power distance individuals or cultures would be inclined to have high intentions to stay with the organisation. On the basis of literature presented above, the following hypothesis is proposed:

Hypothesis 8

Power distance significantly and negatively affects turnover intention.

2.11.5.3 Relationship between uncertainty avoidance and turnover intention

Uncertainty avoidance oriented individuals subscribe to highly developed rules, regulations, rituals, procedures and processes for dealing with uncertainty (Hofstede, 1983). These individuals tend to strive for minimising vagueness, ambiguity and insecurities, hence these individuals are expected to display less turnover intention and behaviour (Matsumoto & Juang, 2017). High uncertainty avoidance individuals tend to have negative perceptions to personal initiative and frown upon it (Matsumoto & Juang, 2017). Hofstede (1980) argues that lower ambition for individual advancement, less risk taking, loyalty to the employer and virtue and tendency to stay with the same employer are the behaviours that are valued in high uncertainty avoidance cultures.

It would be less expected of individuals who are high on uncertainty avoidance to take an initiative about quitting for better opportunities. It is therefore expected that uncertainty avoidance would be associated with lower turnover intentions or higher intentions to stay. The fear of the unknown implies that individuals are less likely to engage in such risk-taking behaviour as intending to leave. A study by Stuurman *et al*. (2012) reported a negative significant correlation between uncertainty avoidance and turnover behaviour ($r = -.14$; $p < .05$). Similarly, Luu and Hattrup (2010) supported the assertion that lower uncertainty avoidance is associated with higher turnover intentions. Drawing from the evidence presented in the foregoing literature, the following hypothesis is proposed:

Hypothesis 9

Uncertainty avoidance significantly and negatively affects turnover intention.

2.11.5.4 Relationship between masculinity and turnover intention

According to Matsumoto and Juang (2017), masculinity orientation is characterised by competitiveness, achievement orientation, preference for higher salaries, earnings, recognition, advancement and challenge, with relatively less concern for other employees' feelings and well-being. Masculinity orientated cultures or individuals' pursuit of achievement and advancement means that they are likely to harbour turnover intentions. They practically leave the organisation in order to realise advancement, either in terms of earnings, status or recognition. On the other hand, feminine orientated cultures and individuals prioritise investing in people and relationships rather than money, value job security and prioritise quality of life (Matsumoto & Juang, 2017). Because of the importance of salience of social relationships (Matsumoto & Juang, 2017), feminine orientated individuals have a higher sense of identifying with the group or with the organisation, which in turn lowers their quitting intentions.

Masculine cultures and individuals who are driven by their higher need for advancement would be expected to have less organisational loyalty and to have higher turnover intention, and exhibit more turnover behaviour as a way of realising their goals. Cheng and Stockdale (2003) associated masculinity with assertiveness and valuing money and things. Assertive individuals would make quitting plans, including harbouring quitting intentions and activating them when the conditions are right. A study by Wang, Chen, Hyde and Hsieh (2010) found that financial satisfaction, which should be a salient factor for individuals who are high on masculinity, had a highly negative ability in predicting turnover intentions ($\beta = -.515$; $p < .001$), indicating that individuals with financial satisfaction are less likely to quit. On the basis of this theoretical and empirical background, the following hypothesis is proposed:

Hypothesis 10

Masculinity positively affects turnover intention.

2.11.5.5 Relationship between long-term orientation and turnover intention

It is consistent with the literal meaning of the cultural dimension of long term dimension that cultures and individuals with a long-term orientation as opposed to short-term orientation will have a long-term stay or tenure. Hofstede (1983) and Matsumoto and Juang (2017) characterise long-term orientated cultures as associated with delayed gratification of material, social and emotional needs among its members, with a high focus on interpersonal relationships rather

than bottom line profits. Cultures and individuals with long term orientation would be expected to be less concerned with immediate rewards and accumulation of wealth on a short-term basis. Even if long-term oriented individuals are dissatisfied with remuneration, they are not expected to have thoughts of quitting (Matsumoto & Juang, 2017). Long-term orientation is also associated with low levels of ambition. Such cultures or individuals should be less likely to leave an organisation for better opportunities elsewhere. Their focus on personal relationships should further crystallise their identification with the workgroup and/or organisation, leading to higher levels of intention to stay in an organisation, and low employee turnover (Hofstede, 1980). The following hypothesis is therefore proposed between long-term orientation and turnover intention:

Hypothesis 11

Long-term orientation negatively affects turnover intention.

2.11.6 Relationship between job satisfaction and organisational commitment

An employee who is job satisfied in terms of pay, responsibility, freedom to choose own working method, job variety, fellow workers, physical working conditions, opportunity to use own ability, hours of work, recognition and promotions (Cooper, Rout & Faragher, 1989) is expected to demonstrate more commitment to the organisation. The perception of the good that the organisation is doing to enhance the satisfaction of the employees should reciprocate and reflect in highly committed employees that are willing to go the extra mile for the well-being of an organisation. The effect of job satisfaction on organisational commitment has been proposed by a number of researchers and authors, including Winterton (2004), Mobley, Horner and Hollingsworth's (1978) and Hom, Caranikas-Walker Prussia and Griffeth (1992).

Mosadeghrad *et al*. (2008) reported a positive, moderately strong and significant correlation between job satisfaction and organisational commitment ($r = .637$; $p < .01$) with further results indicating that the effect of job satisfaction on organisational commitment was stronger than the effect of organisational commitment on job satisfaction. Although some researchers have suggested a reciprocal relationship between job satisfaction and organisational commitment (Mosadeghrad *et al*., 2008) these results tend to support the proposition that job satisfaction determines commitment rather than the other way around. Furthermore, Shore and Martin (1989) reported a positive, moderately strong, significant correlation between job satisfaction and organisational commitment ($r = .56$; $p < .001$). Bufquin *et al*. (2017) reported a statistically

significant positive effect of job satisfaction on organisational commitment ($\beta = .657$; $p < .001$). The following hypothesis is therefore proposed:

Hypothesis 12

Job satisfaction positively affects organisational commitment.

2.11.7 Relationship between work-related attitudes and turnover

The following section elucidates the relationship between work-related attitudes, work-related attitudes of job satisfaction and organisational commitment, and the outcome variable of this study, turnover intention.

2.11.7.1 Relationship between Organisational Commitment and turnover intention

Regarded as a positive and desirable psychological state associated with attachment, continued membership and positive feelings of obligation to remain with an organisation (Mowday & Steers, 1979), high organisational committed individuals develop strong bonds and strong feelings to remain or stay with the workgroup and/or organisation. Organisational commitment should have a positive effect on intention to stay with an organisation. Highly committed employees have strong acceptance of organisational values and norms (Tremble, Payne, Finch & Bullis, 2003), leading to increased effort and positive feelings about the organisation.

Like job satisfaction, the effect of organisational committment on turnover intentions is the subject of numerous conceptual turnover models and empirical studies (Yang & Lee, 2009). Organisational committed is the focus of Martin's (2004) stages of the process of voluntary separation, Mobley, Griffeth, Hand and Meglino's (1979) process of employee turnover model, Mobley, Horner and Hollingsworth's (1978) turnover theory (Hom, Caranikas-Walker, Prussia & Griffeth, 1992) and a number of other conceptual models.

Empirical evidence regarding the relationship between organisational commitment and turnover and intention to stay/quit/turnover intentions has been reported in a number of studies. For example, Shore and Martin (1989) reported a high, positive and significant correlation between intention to stay and organisational commitment ($r = .76$; $p < .001$). Limyothin and Trichun (2012) reported a relatively strong correlation between organisational commitment and intention to stay ($r = .63$; $p < .001$). Wasti (2003) reported a negative, moderate to moderately

high and significant correlation values between organisational commitment and intention to leave, ranging from -.35 to -.54 ($p < .001$). Furthermore, Mosadeghrad *et al*. (2008) reported a positive, moderately strong and significant correlation between organisational commitment and intention to stay ($r = .436$; $p < .01$). Van Breukelen *et al*. (2004) reported a negative, moderate and significant correlation between organisational commitment and intention to leave ($r = -.43$; $p < .01$). Filipova (2009) found a moderately high, negative but significant correlation between organisational commitment and intent to leave ($r = -.62$; $p < .001$). Results of a study by Tumwesigye (2010) found negative, relatively high correlation between organisational commitment and turnover intentions ($r = -.735$). Ali and Baloch (2009) found a negative significant association between commitment and turnover intention ($r = -.394$, $p < .000$). Bufquin *et al*. (2017) reported a statistically significant negative effect of organisational commitment on turnover intention ($\beta = -.502$; $p < .001$). Based on the above theoretical and empirical observations, the following hypothesis is proposed:

Hypothesis 13

Organisational commitment negatively affects turnover intention.

2.11.7.2 Relationship between job satisfaction and turnover intention

Reflecting individuals' attitudinal reactions to their jobs and described as a pleasurable emotional state resulting from appraising one's job (Baloch, 2009), it should go without saying that job satisfied employees have positive outlooks, attitudes and reactions towards their jobs and the organisation. Job satisfied employees develop pleasurable experiences from their association with the organisation and would be expected to have higher inclinations or intentions of staying in their jobs and with the organisation, and to harbour lower inclinations of quitting their jobs and organisations. While Lum *et al.*, (1998) argued that job dissatisfaction, which has been repeatedly identified as the most important reason why employees leave their jobs, has an indirect effect on turnover through its effect on turnover intentions, Boles, Wood and Johnson (2003) emphasised that job satisfaction is either directly or indirectly related to job turnover intentions. Furthermore, Zaghloul, All-Hussaini and Al-Bassam (2003) categorically specify that the most important correlate of turnover intentions is job satisfaction; employees who are satisfied with their work or organisation tend to remain in their jobs/organisations.

The effect of job satisfaction on turnover intentions is the subject of numerous conceptual turnover models and empirical studies (Yang & Lee, 2009). Job satisfaction is the central focus of Martin's (2004) stages of the process of voluntary separation, Mobley *et al*.'s (1979) process of employee turnover model, Mobley *et al*.'s (1978) turnover theory and the Hom *et al*. (1992) turnover cognitions model.

Empirical evidence regarding the relationship between job satisfaction and turnover and intention to stay/quit/turnover has been reported in numerous studies. Shore and Martin (1989) reported a moderately high, positive and significant correlation between intention to stay and organisational satisfaction ($r = .60$; $p < .01$). A structural equation model study with LISREL of Egan, Yang and Bartlett (2004) found that job satisfaction has a very strong effect on turnover intention (SPC = -.43, $p < .01$). Limyothin and Trichun (2012) reported a relatively strong correlation between job satisfaction and intention to quit ($r = .60$; $p < .01$). Another structural equation model study using LISREL analysis, by Lambert, *et al*. (2001), reported that among a number of independent variables, job satisfaction has the largest total number of effects on turnover intentions, all of them direct. Van Breukelen *et al*. (2004) reported a negative, moderate and significant correlation between job satisfaction and intention to leave ($r = -.38$; $p < .01$). Filipova (2009) also found a moderately high, negative but significant correlation between job satisfaction and intent to leave ($r = -.57$; $p < .001$). Galletta *et al*. (2011) reported a negative, low but significant correlation between job satisfaction and employee turnover ($r = -.233$; $p < .01$) and hierarchical regression results demonstrated that job satisfaction negatively determines turnover intention ($\beta = -.19$: $p < .001$). Bufquin *et al*. (2017) reported a statistically significant negative effect of job satisfaction on turnover intention ($\beta = -.172$; $p < .001$). Allisey *et al*. (2014) also established that job satisfaction ($R = -.88$, $p < .000$) was strongly negatively associated with intentions to quit. Correlation analysis results of a study by Akhtar *et al*. (2016) indicated that turnover intention was negatively and significantly correlated to job satisfaction (-.904; $p < .01$).

Hypothesis 14

Job satisfaction negatively affects turnover intention.

2.11.8 Effect of perceived support on job-related attitudes

Drawing from the organisational support theory (OST) and the social exchange perspective (Tuzun & Kalemci, 2011), Eisenberger and colleagues argue that if employees feel that the

organisation supports, recognises and rewards them appropriately, they will reciprocate the gesture by expending extra energy for attainment of organisational goals and positive work outcomes (Eisenberger *et al*., 2002). Perceived organisational support (POS) is evident when employees feel that the organisation, oftentimes through their supervisors, cares for and values their contribution and has been associated with numerous positive work outcomes, including increased effort, diligence, conscientiousness and innovation (Eisenberger, Fasolo & Davis-LaMastro, 1990), job performance, productivity and enthusiasm (Eisenberger, & Stinglhamber, 2011), extra-role performance (Chen, Eisenberger & Johnson, 2009) as well as reduced withdrawal behaviour (Eder & Eisenberger, 2008). The impact of employee perceived organisational support (POS) on positive work outcomes has recently enjoyed increased attention from organisational theorists (Colakoglu, Culha & Atay, 2010). POS has been defined as "the degree to which an organisation values employees' contributions and cares about them" (Eisenberger, Cummings, Armeli & Lynch, 1997, p. 812).

Another organisational theory construct that is closely related to POS which also functions on the reciprocity principle is perceived supervisory support (PSS) (Tuzun & Kalemci, 2011). PSS is defined as the degree to which supervisors value their subordinates' contributions and value their well-being. PSS has been identified as the precedent of POS (Eisenberger *et al.,* 2002). The following section examines the relationship between POS and PSS as well as the three work outcomes of job satisfaction, organisational commitment and turnover intention.

2.11.8.1 Relationship between perceived supervisory support and job satisfaction

DeConinck and Johnson (2009) argue that PSS has a great influence on employee attitudes. The close association between POS and PSS has been reported, drawing from the fact that because supervisors are part of an organisation, perceptions of supervisory support makes employees feel that the organisation also supports them (DeConinck & Johnson, 2009). If employees perceive that their supervisors support, value and recognise their contribution to the organisation, the employees are likely not only to reciprocate the feeling with increased effort towards attainment of organisational goals, but also through increased job satisfaction. Employee perceptions of higher support by the supervisor results in job satisfied employees. A study by Galletta, Portoghese and Penna (2011) found a positive moderate and significant correlation between PSS and job satisfaction ($r = .485$; $p < .01$). Further hierarchical regression analysis demonstrated that PSS determines job satisfaction ($\beta = .40$; $p < .001$). Lobburi (2012)

found a positive, moderate and significant correlation between PSS and job satisfaction (r = .44). In addition, Allisey *et al*. (2013) established that supervisory/managerial support had a statistically significant positive effect on job satisfaction. In view of this theoretical and empirical evidence, the following hypothesis is proposed:

Hypothesis 15

Perceived supervisory support positively effects job satisfaction.

2.11.8.2 Relationship between perceived supervisory support and organisational commitment

Perceived supervisory support is the extent to which employees perceive that their supervisors care about them, value their contribution and the supervisor is regarded as the agent of the organisation (Kuvaas & Dysvik, 2010). It would therefore be expected that increased perceptions of supervisory support should be associated with increased employee effort and involvement and increased organisational commitment. The reciprocal relationship between perceptions of support and effort describes the relationship between perceived supervisory support and organisational commitment (Eisenberger *et al*., 1999). How employees perceive support from their supervisor could have wide-ranging consequences not only for the organisation, but for individual employees too. Perceived supervisory support (PSS) could affect how employees feel about the general support they receive from the organisation (DeConinck & Johnson, 2009) and could determine their motivation (Woo & Chelladurai, 2012). Woo and Chelladurai (2012) reckon that perception of support is one of the factors that helps cultivate organisational commitment because employees who feel supported will reciprocate that by committing more to the organisation. The Social Exchange Theory (SET) explains the relationship between PSS and organisational commitment in terms of reciprocity or repayment in kind when employees feel that the organisation supports them and they have to do so in return by, *inter alia*, show of commitment and increased effort (Cropanzano & Mitchell, 2005). Social exchange theory (SET) explains the relationship between these two constructs by arguing that employees who perceive high supervisory support are giving back to the organisation increased commitment (Eisenberger, *et al*., 1986).

Maertz, Griffeth, Campbell and Allen (2007) found positive, moderate and significant correlations between perceived supervisory support and two dimensions of organisational commitment, *i.e*. affective commitment (r = .37) and normative commitment (r = .44). Kuvaas

and Dysvik (2010) reported a moderately strong correlation between one dimension of organisational commitment, *i.e.* affective organisational commitment, and perceived supervisory support (r = .51). DeConinck and Johnson (2009) also reported a positive, moderate and significant correlation between perceived supervisory support and organisational commitment (r = .30). Maertz *et al*. (2007) concluded that perceived supervisory support only affect turnover intentions through organisational support. Woo and Cheradurai (2012) reported positive, significant, moderate (r = .25) to strong (r = .74) correlations between continuance organisational commitment and affective organisational commitment, respectively. Also, Amma, Thaliya and Muthulakshmi (2014) reported a positive, moderate correlation (r = .415) between organisational commitment and perceived supervisory support. On the basis of the above theoretical and empirical evidence, the following hypothesis is proposed:

Hypothesis 16

Perceived supervisory support positively affects organisational commitment.

2.11.8.3 Relationship between perceived supervisory support and perceived organisational support

Tan (2008) states that employees view their supervisors and managers and other social organisational agents as integral part of an organisation. This leads to employees viewing supervisory support as organisational support. In fact, supervisory support is considered to cause or precede organisational support.

A study by Tuzun and Kalemci (2011) reported a moderate, positive and significant correlation between POS and PSS (r = .48). Also, Eisenberger *et al*. (2002) found a relatively high, positive and significant correlation between PSS and POS (r = .60). Furthermore, a study by Tan (2008) found a positive, relatively high and significant bivariate correlation between PSS and POS (r = .62; p < .01), and further SEM analysis using AMOS of parameter estimates demonstrated that PSS determines POS (b = .30; p < .001). On the basis of this theoretical and empirical evidence, the following hypothesis is postulated:

Hypothesis 17

Perceived supervisory support positively affects perceived organisational support.

2.11.8.4 Relationship between perceived supervisory support on turnover intention

Tuzun and Kalemci (2011) argued that employees with high PSS reciprocate that through possession of high feelings and intentions to exert extra effort towards the attainment of organisational goals, less likeness to seek and accept employment in other organisations, and high willingness to remain with the organisation. High PSS is associated with less turnover intentions. Furthermore, Ariyabuddhiphongs and Kahn (2017) argued that that if leaders adopt and practice an acceptable positive leadership style, create trust between themselves and their subordinates and empower employees to improve their performance, turnover intention would be reduced and talent retention in organisations would improve substantially. Ariyabuddhiphongs and Kahn (2017) argued that immediate managers/supervisors are the best predictors of turnover intention since their support determines whether employees stay with, or leave an organisation.

Adil and Awais (2016) found that a close relationship that is built on mutual trust between a leader/supervisor and the subordinate had a significant negative effect on turnover intention. Furthermore, Tuzun and Kalemci (2011) found a negative, moderate but significant correlation between PSS and turnover intention ($r = -.35$; $p < .01$). Also, a study by Tan (2008) found a negative, moderate and significant bivariate correlation between PSS and turnover intention ($r = -.29$; $p < .01$). On the basis of this theoretical and empirical evidence, the following hypothesis is postulated:

Hypothesis 18

Perceived supervisory support negatively affects turnover intention.

2.11.8.5 Relationship between perceived organisational support and job satisfaction

Because POS is associated with an organisation that concerns, cares and supports its employees, it goes without saying that it should imply more positive work and job-related attitudes, including job satisfaction on the part of the employees. If employees perceive that the organisation supports them, they are likely to be more job satisfied. Thus, the higher POS is, the higher job satisfaction will be.

Wann-Yih and Htail (2011) reported a relatively high correlation between POS and job satisfaction ($r = .795$; $p < .01$), while the SEM path analysis demonstrated a positive association between these two variables ($\gamma = .700$; $p < .001$), indicating that employees who perceive high organisational support are highly satisfied with their jobs. On the basis of this theoretical and empirical evidence, the following hypothesis is postulated:

Hypothesis 19

Perceived organisational support positively affects job satisfaction.

2.11.8.6 Relationship between perceived organisational support and organisational commitment

The relationship between POS and organisational commitment is best described by the principle of reciprocity and Social Exchange Theory (SET) (Beheshtifar & Herat, 2013). Reciprocity and SET maintain that if employees perceive that an organisation provides them with support and recognition they in turn reciprocate that by not only putting in more effort towards goal attainment, but by showing more loyalty and attachment (Tan, 2008; Tumwesigye, 2010). A study by Wann-Yih and Htail (2011) reported moderate to high correlations between POS and the three dimensions of organisational commitment, *i.e.* continuance commitment ($r = .303$; $p < .01$), normative commitment ($r = .411$; $p < .001$) and affective commitment ($r = .738$; $p < .001$), while the SEM path analysis results also indicated that the relationship between perceived organisational support and organisational commitment (affective, continuance and normative) was positive and significant ($\gamma = .743$, $p < .001$, $\gamma = .415$, $p < .001$, $\gamma = .551$, $p < .001$). This provides evidence that if employees believe that their organisation supports and cares for their well-being, they are more likely to feel a sense of obligation toward the organisation and reciprocate the favorable treatment with increased loyalty and commitment. Tansky and Cohen, (2001) reported a positive, relatively high significant correlation ($r = .57$) between perceived organisational support and organisational commitment. Furthermore, a study by Fard, Seyedyousefi and Tohidi (2015) reported a positive significant correlation between perceived organisational support and organisational commitment. On the basis of this theoretical and empirical evidence, the following hypothesis is postulated:

Hypothesis 20

Perceived organisational support positively affects organisational commitment.

2.11.8.7 Relationship between perceived organisational support and turnover intention

Tuzun and Kalemci (2011) attributed reciprocity to employees with high POS which makes them feel obligated to exert extra effort towards the attainment of organisational goals, less likeness to seek and accept employment in other organisations and their high willingness to remain with the organisation. High POS is associated with less turnover intention. It is expected that if employees feel that the organisation cares about them and rewards their effort, employees will reciprocate the perception and not only put in extra effort towards the realisation of organisational goals, but will also feel accepted, be loyal in turn and may stay longer with the organisation. Colakoglu *et al*. (2010, p. 128) argue that "POS is one of the most important organisational concepts that keep employees in an organisation…"

Tuzun and Kalemci (2011) found a negative, moderate but significant correlation between POS and turnover intention ($r = -.48$; $p < .01$). A study by Tan (2008) found a negative, moderate and significant bivariate correlation between POS and turnover intention ($r = -.39$; $p < .01$), and further SEM analysis using AMOS of parameter estimates demonstrated that POS determines turnover intention ($b = -.33$; $p < .001$), with a negative causal relationship between the two variables. A study by Tumwesigye (2010) reported moderate, negative but significant correlation between POS and turnover intention ($r = -.442$). On the basis of this theoretical and empirical evidence, the following hypothesis is postulated:

Hypothesis 21

Perceived organisational support negatively affects turnover intention:

The next section reviews the mediating effect of work-related attitudes variables, perceived supervisory support and perceived organisational support on the relationship between cultural value dimensions and turnover intention. This section therefore examines the indirect effect of Hofstede's cultural value dimensions at individual level on turnover intention.

2.11.9 Mediating effect of work-related attitudes on the relationship between culture and turnover intention

Previous studies have shown that the relationship between cultural value dimensions and turnover intention could be mediated by job satisfaction and organisational commitment (Lu, 2006; Luu & Hattrup, 2010; Lobburi, 2012; Khawaldeh, Muala & Ziadat, 2014; Tarigan &

Ariani 2015). This section reviews these mediating or indirect effects of cultural variables on turnover intention via job satisfaction and/or organisational commitment.

2.11.9.1 The mediating effect of job satisfaction on relationship between **Collectivism** *and turnover intention*

Research has shown that Collectivism has an effect on job satisfaction (Hui & Yee, 1999; Kirkman & Shapiro, 2001) which in turn has an impact on turnover intention (Mobley, 1979; Michaels & Spector, 1982; Hom *et al*., 1982). This could be interpreted to mean that the impact of Collectivism on turnover intentions affects turnover intentions via its effect on job satisfaction. Stated differently, the effect of Collectivism on turnover intention could be through job satisfaction. On the basis of the above theoretical evidence, the following hypothesis is proposed:

Hypothesis 22

Job satisfaction mediates the effect of Collectivism on turnover intention.

2.11.9.2 The meditating effect of organisational commitment on relationship between Collectivism and turnover intention

In the previous studies, organisational commitment has appeared as both a consequence of collectivist cultural orientation (Hui & Yee, 1999; Kirkman & Shapiro, 2001) and an antecedent of turnover intention (Jaros, 1997; Kirkman & Shapiro, 2001; Mobley, 1977; Parasuramam, 1982; Steel, 2002; Tett & Meyer, 1993; Winterton, 2004). Because Collectivism enforces social striving and job security (Matsumoto & Juang, 2017), it is thought to be an antecedent of organisational commitment as well as turnover intention and behaviour. Parkes and Bochner (2001) argued that the familial relationship between employer and employee characterised by job security in return for loyalty, trust and organisational commitment should result in a link between Collectivism and organisational commitment. Research has shown that organisational commitment has an impact on turnover intention (Michaels & Spector, 1982; Winterton, 2004). This could be interpreted to mean that the impact of Collectivism on turnover intention happens via its effect on organisational commitment. Stated differently, the effect of Collectivism on turnover intention could be through organisational commitment. On the basis of the above theoretical evidence, the following hypothesis is proposed:

Hypothesis 23

Organisational commitment mediates the effect of Collectivism on turnover intention.

2.11.9.3 The meditating effect of organisational commitment on relationship between job satisfaction and turnover intention

In previous studies, organisational commitment has appeared as both a consequence of job satisfaction (Mosadeghrad *et al*., 2008; Shah *et al.*, 2012) and an antecedent of turnover intention (Jaros, 1997; Kirkman & Shapiro, 2001; Mobley, 1977; Parasuramam, 1982; Steel, 2002; Tett & Meyer, 1993; Winterton, 2004). Because job satisfaction is an evaluative perception one has about his/her job, it is expected that a positive evaluation of one's job is an antecedent of organisational commitment, which in turn determines and contains the elements of turnover intention (Lok & Crawford, 2004). The results of a study by Lum *et al*. (1998) indicated that job satisfaction only indirectly influenced intention to quit, whereas organisational commitment had the strongest direct impact, confirming the assertion that organisational commitment mediates the effect of job satisfaction on turnover intentions (Shore & Martin, 1989). On the basis of the above theoretical and empirical evidence, the following hypothesis is proposed:

Hypothesis 24

Organisational commitment mediates the effect of job satisfaction on turnover intention.

2.11.9.4 The mediating effect of job satisfaction on relationship between perceived supervisory support and turnover intention

In previously reviewed studies, job satisfaction has appeared as both a consequence of PSS (DeConinck & Johnson, 2009; Galletta *et al.*, 2011) and an antecedent of turnover intention (Tan, 2008; Tuzun & Kalemci, 2011). Because of the close association between POS and PSS and the expectation that if high PSS (an individual level micro construct) extends to high POS (an organisational level macro construct), this relationship will further extend the reciprocal relationship, resulting in an individual employee adopting positive work-related attitudes and prosocial organisational behaviours (Eisenberger *et al*., 2002), it would then be hypothesised that PSS determines job satisfaction, which in turn determines turnover intention. On the basis of the above theoretical and empirical evidence, the following hypothesis is proposed:

Hypothesis 25

Job satisfaction mediates the effect of perceived supervisory support on turnover intention

2.11.9.5 The mediating effect of perceived organisational support on the relationship between perceived supervisory support and turnover intention

POS has appeared as both a consequence of PSS (Tan, 2002) and an antecedent of turnover intention (Eisenberger *et al*., 2002; Tan, 2002; Tuzun & Kalemci, 2011). PSS has an indirect effect on turnover intention that goes via POS; and that PSS may be a more distal determinant of turnover intention as a critical antecedent of POS. This result suggests that PSS does not have a direct effect on turnover intention but its effect on turnover intention goes via POS; hence PSS may be a significant distal determinant of turnover intention as a critical antecedent of POS.

A study by Kalidass and Bahron (2015) found that PSS had a significant relationship with turnover intentions only when the relationship was mediated by POS, corroborating the mediation effect of POS in the negative relationship between PSS and turnover intention. Similarly, Newman and Thanacoody (2010) found that PSS was significantly positively related to POS; both PSS and POS were significantly negatively related to turnover intention, while POS mediated the effect of PSS on turnover intention in a Chinese service sector work environment. These studies demonstrated that if employees feel that the supervisor supports them, they are likely to extend their positive perceptions to the organisation, which in turn leads to low intentions of leaving the organisation. SEM analysis with AMOS conducted by Tan (2002) provided evidence that POS does mediate the relationship between PSS and turnover intention. On the basis of the above theoretical and empirical evidence, the following hypothesis is proposed:

Hypothesis 26

Perceived organisational support mediates the effect of perceived supervisory support on turnover intention.

2.11.9.6 The mediating effect of perceived supervisory support on the effect of **Collectivism** *on turnover intention*

Collectivist individuals tend to build strong bonds and relationships with both co-workers and supervisors. Collectivist individuals pursue group cohesion, cooperation and tend to be high on

obliging, and compliance (Matsumoto & Juang, 2017). Collectivist individuals would be inclined to develop and maintain close, cooperative, respectful and communal relationships with their supervisors, culminating in perceptions of high supervisory support. Conversely, individuals who have high perceptions of supervisory support are likely to also have positive evaluations of their organisations and are expected to have lower intentions of quitting. Based on the relationships between these variables, it would be expected that perceived supervisory support mediate the effect of Collectivism on turnover intention. On the basis of the above theoretical background, the following hypothesis is proposed:

Hypothesis 27

Perceived supervisory support mediates the effect of Collectivism on turnover intention.

2.11.9.7 The mediating effect of organisational commitment on the effect of perceived organisational support and turnover intention

In studies reviewed thus far, organisational commitment has appeared as both a consequence of POS (Wann-Yih & Htail, 2011) and an antecedent of turnover intention (Tan, 2008). Since POS determines positive and prosocial behaviours, leading to employees investing more effort in their work and become more loyal and committed to their organisation (Eisenberger *et al*., 1986), organisational commitment could be referred to as the mediating variable between POS and turnover intention.

The results of a study by Tumwesigye (2010) demonstrated that all three facets of commitment, *i.e.* continuance, normative and affective commitments of organisational commitment as well as the composite organisational commitment mediate the relationship between perceived organisational support and turnover intention. On the basis of the above theoretical and empirical evidence, the following hypothesis is proposed:

Hypothesis 28

Organisational commitment mediates the effect of perceived organisational support on turnover intention.

2.11.9.8 The meditating effect of job satisfaction on relationship between perceived organisational support and turnover intention

In the reviewed studies, job satisfaction was presented as both a consequence of POS (Wann-Yih & Htail, 2011)) and an antecedent of turnover intention (Egan *et al*., 2004; Filipova, 2009; Lambert *et al*., 2001; Limyothin & Trichun, 2012; Shore & Martin, 1989; Tan, 2008; Tumwesigye, 2010; Tuzun & Kalemci, 2011; van Breukelen *et al*., 2004). Since POS is associated with positive pro-social behaviours and work-related attitudes, including job satisfaction (Gyekye & Salminen, 2009), which in turn lead to low turnover intention, job satisfaction could be regarded as a mediating variable between POS and turnover intention.

Also based on the reciprocal norm whereby employees develop positive work-attitudes because they perceive that an organisation looks after them (Eisenberger, *et al*., 2002) and they develop less turnover intentions, it would be expected that the impact of POS on turnover intention happens through job satisfaction. A study by Allen *et al*. (2003) found a significant negative relationship between POS and withdrawal/turnover intentions which, however, was mediated by job satisfaction amongst US large department store and insurance workers. On the basis of the above empirical and theoretical evidence, the following hypothesis is proposed:

Hypothesis 29

Job satisfaction mediates the effect of perceived organisational support on turnover intention.

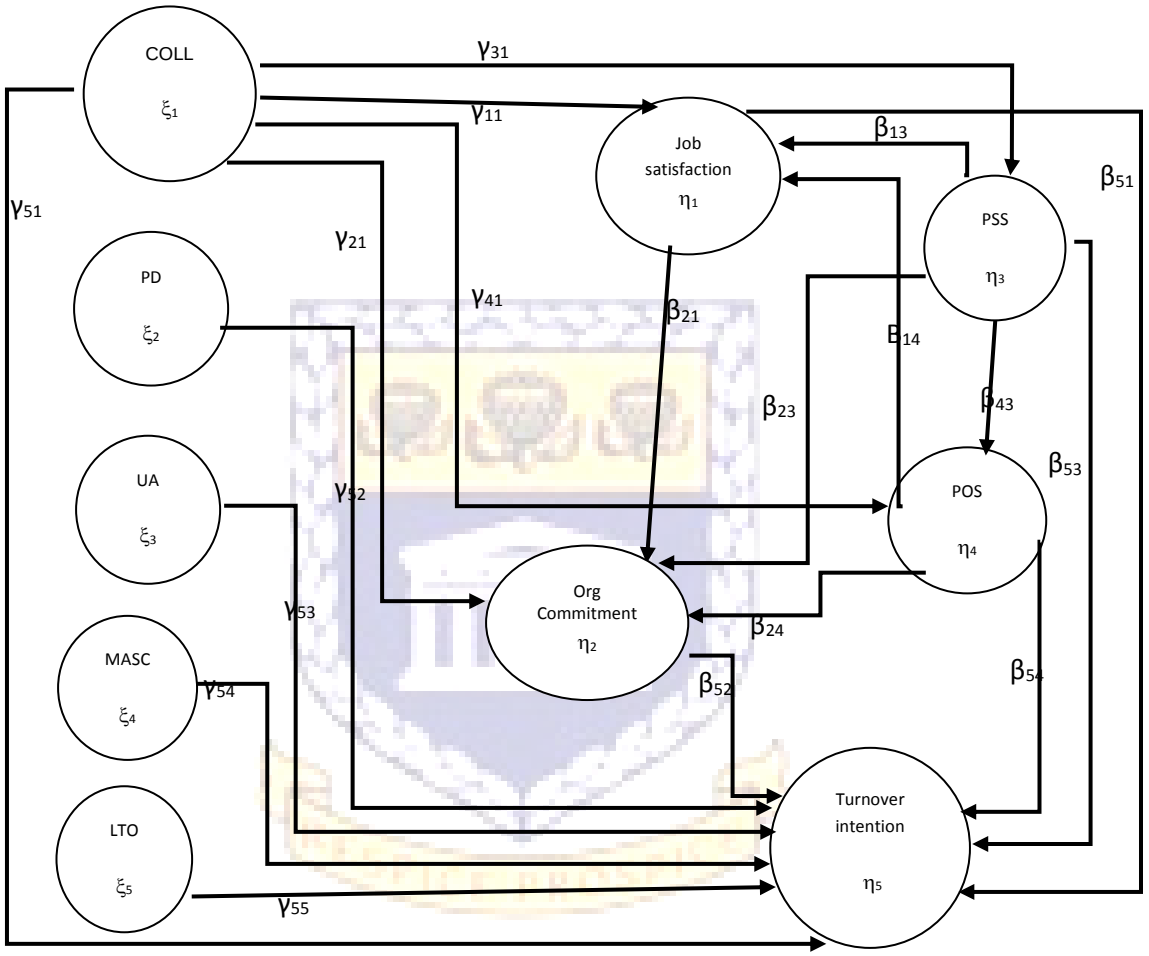
2.12 THE PROPOSED EMPLOYEE TURNOVER INTENTION MODEL

Illustrated in Figure 2.14 is the model developed from the relationships explained in the literature reviewed above among variables of this study, which are cultural values at individual level, perceived organisational support, perceived supervisory support, the job-related attitudes of job satisfaction and organisational commitment and the endogenous variable of turnover intention.

The model presents turnover intention as the dependable endogenous variable. Cultural value dimensions are regarded as the exogenous independent variable. Job-related attitudes of job satisfaction and organisational commitment are treated as the immediate precursors of turnover intention and mediators of the effect of culture on turnover intention. In addition, POS and PSS

are regarded as mediators on the effect of individual cultural value dimensions on turnover intention.

Fig 2.14 The proposed individual culture-work-related attitudes - turnover intention model



2.13 SUMMARY

This chapter introduced the need for developing employee retention models that incorporate a number of employee retention strategies and further highlighted the limited research that investigate the impact of personal, dispositional, malleable factors of turnover intention and behaviour. This was followed by a discussion of one of the earliest theories that contributed to a better understanding of the turnover process, *i.e.*, Mobley's (1977) heuristic model. The

model's validation studies were then examined. Furthermore, another important model, *i.e.*, Mobley and associates' (1979) model was examined. Thereafter, further dominant models in the area of employee turnover were reviewed, together with a handful of other theories that are relevant to this current study. The last section of this chapter reviewed the relationships between cultural value dimensions at individual level, work affect, perceived supervisory and organisational support and turnover intention variables, and the generation of the expected and theoretically-driven assumptions to derive the assumptions and hypotheses of the study. The next chapter reviews the research methodology that was adopted in conducting this research.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The previous chapter culminated in the basic integrated individual culture-work-related attitudes-turnover intention structural model in which turnover intention, instead of the actual turnover behaviour is treated as the primary dependent outcome. The model is theory-driven. Furthermore, the model expanded the narrow view of personal dispositions/static approaches because not only were values and attitudes incorporated but the model also included Hofstede's cultural value dimensions at individual level.

In line with the majority of retention theories (e.g. Lee & Mitchell, 1999; Martin, 1979; Mobley, et al. 1979; Winterton, 2004), work-related attitudes/work attitudinal variables of job satisfaction and organisational commitment are incorporated in the model as variables that determine turnover intention. The model is expanded by incorporating Hofstede's cultural value dimensions at individual level as independent latent variables, while perceived organisational support and a closely related variable, *i.e.* perceived supervisory support are included as additional mediating variables. This was aimed at incorporating the proxies of the organisation through individual perceptions as well as that of the organisational social relations through the perceptions of supervisory support.

According to Matsumoto and Juang (2017), the two important goals of psychology are: 1) to build a body of knowledge about psychological phenomena, and 2) to apply that knowledge to intervene in the betterment of people's lives. These goals are achieved through the process of research. The process of inquiry should therefore be conducted in a scientific and systematic manner in order to make valid and reliable conclusions regarding observations. Conducting scientific inquiry through research is the primary vehicle for building the body of knowledge and theory. The importance of research methodology in the scientific inquiry process cannot be underemphasised. Following the presentation of an in-depth study of the literature that culminated in the postulation of the hypotheses guiding the current study, the research methodology employed to subsequently test the hypotheses is presented.

Fig 3.1. The proposed individual culture-work-related attitudes-turnover intention model

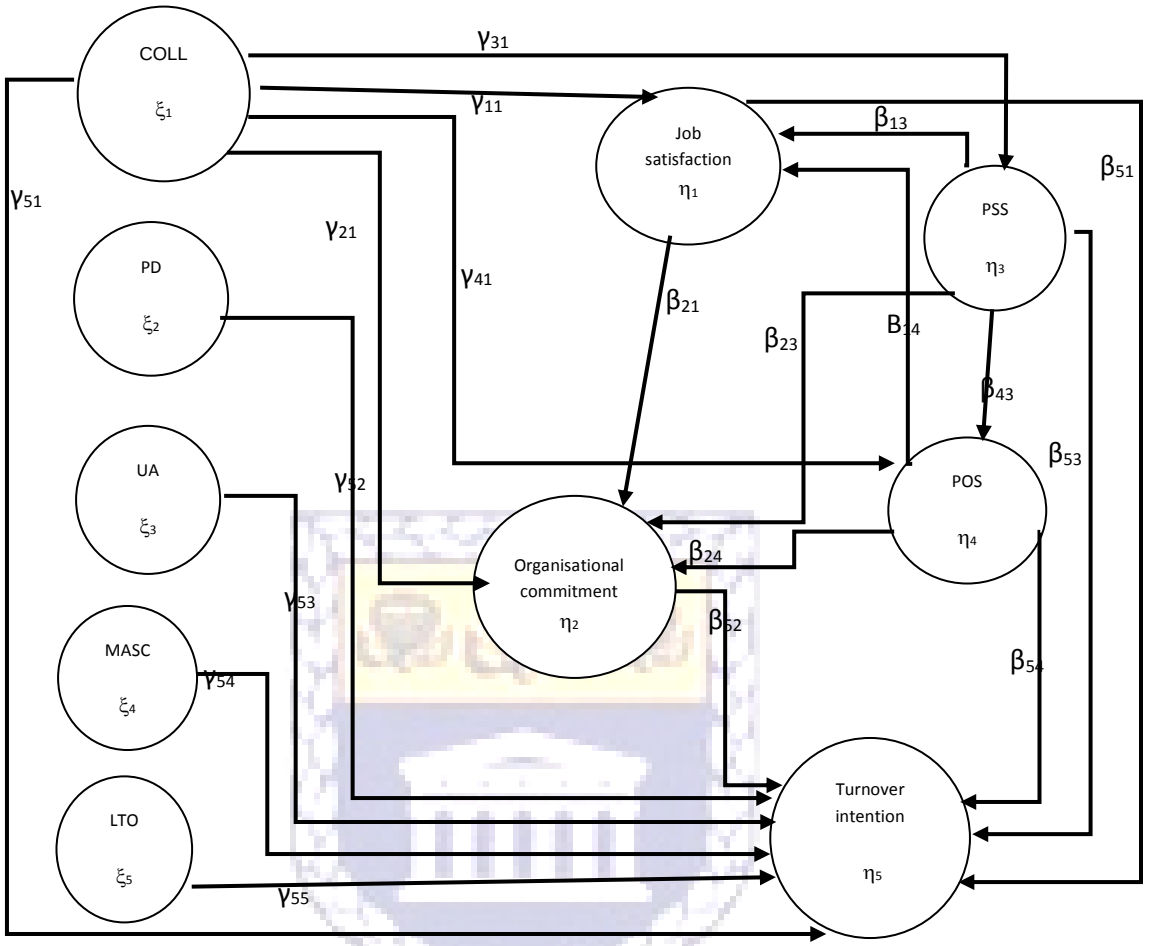


Figure 3.1: The proposed individual culture-work-related attitudes - turnover intention model. ξ = ksi/exogenous variable; η = eta/endogenous variable; γ = gamma path (hypothesis), representing an effect of ksi (ξ) variable on η (eta) variable; β = beta path (hypothesis) representing an effect of η (eta) on η (eta). Coll (ξ_1) = Collectivism; PD (ξ_2) = Power distance; UA (ξ_3) = Uncertainty avoidance; MASC (ξ_4) = Masculinity; LTO (ξ_5) = Long-term orientation; η_1 = job satisfaction; η_2 = organisational commitment; PSS (η_3) = Perceived supervisory support; POS (η_4) = Perceived organisational support; η_5 = Turnover intention.

3.2 SUBSTANTIVE AND STATISTICAL RESEARCH HYPOTHESES

As pointed out earlier, the primary objective of this research was to develop a turnover intention model that integrates cultural value dimensions at individual level, work–related attitudinal variables and perceptions, and organisational and supervisory support. It is hypothesised that the integrated structural model depicted in Figure 3.1 provides a valid account of the manner in which the determinants of turnover intention combine to affect it. The following interlinkages among the variables of the study are proposed.

Ideally, researchers endeavour to develop, estimate and fit measurement models that should guarantee a good fit so that inferences of the structural model hypotheses are made with confidence from the fit statistics of the comprehensive model. The measurement model substantive research hypothesis states that the measurement model, by the way in which the latent variables in the individual culture-work affect-perceived support-turnover intention model have been operationalized, provides a valid account of the process that produces the observed variance-covariance matrix. The following measurement model substantive research hypothesis would represent a condition whereby the measurement model provides a perfectly accurate description of the process that produces the observed variance-covariance matrix.

H_{01a}: RMSEA = 0

H_{a1a}: RMSEA > 0

In reality, however, the exact fit hypothesis may not be attainable, whereupon the realistic approach would be to test a close fit null hypothesis which alludes that the measurement model provides only an approximate description of the process that produced the observed variance-covariance matrix of the measurement model. The substantive research hypothesis would therefore translate to the following hypothesis:

Hypothesis 1: The measurement model provides an approximate description of the process that determines turnover intention.

H_{01b}: RMSEA $\leq$.05

H_{a1b}: RMSEA > .05

If the overarching structural model substantive research hypothesis is interpreted to mean that the structural model provides a perfect account of the individual culture-work affect -perceived support-turnover intention model, the substantive research hypothesis translates into the following exact fit null hypothesis:

$$H_{02a}: RMSEA = 0$$

$$H_{a2a}: RMSEA > 0$$

In reality, the exact fit hypothesis may not be attainable, whereupon the realistic approach would be to test a close fit null hypothesis which indicates that the structural model provides only an approximate description of the process that produced the observed variance-covariance matrix of the structural model. The substantive research hypothesis would therefore translate to the following hypothesis:

$$H_{02b}: RMSEA \leq .05$$

$$H_{a2b}: RMSEA > .05$$

Hypothesis 2: The structural model provides an approximate description of the process that determines turnover intention.

The overarching structural model substantive research hypotheses was further dissected into 26 detailed, path-specific substantive research hypotheses. These 26 path-specific research hypotheses translate into the following substantive and path coefficient statistical hypotheses:

Hypothesis 3: Collectivism significantly and positively affects job satisfaction:

$$H_{03}: \gamma_{11} = 0$$

$$H_{a3}: \gamma_{11} > 0$$

Hypothesis 4: Collectivism significantly and positively affects organisational commitment:

$$H_{04}: \gamma_{21} = 0$$

$$H_{a4}: \gamma_{21} > 0$$

Hypothesis 5: Collectivism significantly and positively affects perceived supervisory support:

$H_{05}: \gamma_{31} = 0$

$H_{a5}: \gamma_{31} > 0$

Hypothesis 6: Collectivism significantly and positively affects perceived organisational support:

$H_{06}: \gamma_{41} = 0$

$H_{a6}: \gamma_{41} > 0$

Hypothesis 7: Collectivism significantly and negatively affects turnover intention:

$H_{07}: \gamma_{51} = 0$

$H_{a7}: \gamma_{51} < 0$

Hypothesis 8: Power distance significantly and negatively affects turnover intention:

$H_{08}: \gamma_{52} = 0$

$H_{a8}: \gamma_{52} < 0$

Hypothesis 9: Uncertainty avoidance significantly and negatively affects turnover intention:

$H_{09}: \gamma_{53} = 0$

$H_{a9}: \gamma_{53} < 0$

Hypothesis 10: *Masculinity* significantly and positively affects turnover intention:

$H_{010}: \gamma_{54} = 0$

$H_{a10}: \gamma_{54} > 0$

Hypothesis 11: Long-term orientation significantly and negatively affects turnover intention:

$H_{011}: \gamma_{55} = 0$

$H_{a11}: \gamma_{55} < 0$

Hypothesis 12: Job satisfaction significantly and positively affects organisational commitment:

$H_{012}: \beta_{21} = 0$

$H_{a12}: \beta_{21} > 0$

Hypothesis 13: Organisational commitment significantly and negatively affects turnover intention:

$$H_{013}: \beta_{52} = 0$$

$$H_{a13}: \beta_{52} < 0$$

Hypothesis 14: Job satisfaction significantly and negatively affects turnover intention:

$$H_{014}: \beta_{51} = 0$$

$$H_{a14}: \beta_{51} > 0$$

Hypothesis 15: Perceived supervisory support significantly and positively affects job satisfaction:

$$H_{015}: \beta 13 = 0$$

$$H_{a15}: \beta 13 > 0$$

Hypothesis 16: Perceived supervisory support significantly and positively affects organisational commitment:

$$H_{016}: \beta_{23} = 0$$

$$H_{a16}: \beta_{23} > 0$$

Hypothesis 17: Perceived supervisory support significantly and positively affects perceived organisational support:

$$H_{017}: \beta_{43} = 0$$

$$H_{a17}: \beta_{43} > 0$$

Hypothesis 18: Perceived supervisory support significantly and negatively affects turnover intention:

$$H_{018}: \beta_{53} = 0$$

$$H_{a18}: \beta_{53} < 0$$

Hypothesis 19: Perceived organisational support significantly and positively affects job satisfaction:

$$H_{019}: \beta_{14} = 0$$

$$H_{a19}: \beta_{14} > 0$$

Hypothesis 20: Perceived organisational support significantly and positively affects organisational commitment:

$$H_{020}: \beta_{24} = 0$$

$$H_{a20}: \beta_{24} > 0$$

Hypothesis 21: Perceived organisational support significantly and negatively affects turnover intention:

$$H_{021}: \beta_{54} = 0$$

$$H_{a21}: \beta_{54} < 0$$

Hypothesis 22: Job satisfaction mediates the effect of Collectivism on turnover intention:

$$H_{022}: \gamma_{11}\beta_{51} = 0$$

$$H_{a22}: \gamma_{11}\beta_{51} > 0$$

Hypothesis 23: Organisational commitment mediates the effect of Collectivism on turnover intention:

$$H_{023}: \gamma_{21}\beta_{52} = 0$$

$$H_{a23}: \gamma_{21}\beta_{52} > 0$$

Hypothesis 24: Organisational commitment mediates the effect of job satisfaction on turnover intention:

$$H_{024}: \beta_{21}\beta_{52} = 0$$

$$H_{a24}: \beta_{21}\beta_{52} > 0$$

Hypothesis 25: Job satisfaction mediates the effect of perceived supervisory support on turnover intention:

$$H_{025}: \beta_{13}\beta_{51} = 0$$

$$H_{a25}: \beta_{13}\beta_{51} > 0$$

Hypothesis 26: Perceived organisational support mediates the effect of perceived supervisory support on turnover intention:

$$H_{026}: \beta_{43}\beta_{54} = 0$$

$$H_{a26}: \beta_{43}\beta_{54} > 0$$

Hypothesis 27: Perceived supervisory support mediates the effect of Collectivism on turnover intention:

$$H_{027}: \beta_{31}\beta_{53} = 0$$

$$H_{a27}: \beta_{31}\beta_{53} > 0$$

Hypothesis 28: Organisational commitment mediates the effect of perceived organisational support on turnover intention:

$$H_{028}: \beta_{23}\beta_{52} = 0$$

$$H_{a28}: \beta_{23}\beta_{52} > 0$$

Hypothesis 29: Job satisfaction mediates the effect of perceived organisational support on turnover intention:

$$H_{029}: \beta_{14}\beta_{51} = 0$$

$$H_{a29}: \beta_{14}\beta_{51} > 0$$

The next section examines the research design used in this research undertaking.

3.3 RESEARCH DESIGN

Babbie and Mouton (2001) maintain that scientific, empirical inquiry/research conforms to a standard logic represented as a ProDEC (Pro for problem, D for research design, E for empirical evidence and C for conclusions) framework. The problem of this inquiry was formulated and articulated in Chapter 1 and has been expanded to manifest in the objective of empirical evaluation of the hypotheses that are presented in the previous section. The next logical step is research design, which is described as the overall plan of the scientific inquiry, connecting the conceptual research problems and the pertinent empirical research (Babbie & Mouton, 2001; Johnson, 2001).

This current study used a quantitative survey approach. A quantitative paradigm is adopted when a researcher decides to quantify or attach numerical values to constructs and/or their elements (Babbie & Mouton, 2001). The study quantified the constructs as well as the items that served as the indicators of the latent variables. Furthermore, the study used a number of questionnaires to collect data. Regarding the time dimension and the purpose of the inquiry dimension, this study is cross-sectional since it studied the occurrence of phenomena at a single

time and could be referred to as model testing correlational design (Sousa, Driessnack & Mendes, 2007) or *ex post facto* correlational design study (Lord, 1973), respectively. Sousa *et al*. *(2007)* define an ex post facto research design, also referred to as causal-comparative study, as a design in which a researcher confirms or disconfirms the differences in naturally occurring variables between two or more cases with minimum or little manipulation of the experimental conditions.

Experimental research design is regarded as the most desirable and rigorous form of research, even for making causal or cause-effect references or conclusions (Lord, 1973). Conducting experiments to ascertain cause and effect references amongst variables may not always be feasible for any particular reason, *e.g.* costs, logistics, etc. An *ex post facto* correlational study is a non-experimental research design that is most appropriate when conducting experimental study is problematic or not feasible. These studies examine whether one or more pre-existing conditions could possibly have caused subsequent differences in groups of subject or to make inferences about the relations among variables, without direct intervention, from concomitant variation of independent and dependent variables (Johnson, 2001). Stated differently, researchers in *ex post facto* studies alternatively attempt to discover whether differences between groups have resulted in an observed difference in the independent variable characteristics.

Lord (1973) argues that *ex post facto* design allows for causal-comparative studies when the more powerful experimental designs are not practicable because of either impossibility of selecting, controlling or manipulating factors necessary to study cause-and-effect relations directly, or when laboratory studies would be impractical, costly or ethically questionable. It offers useful information on what goes with what. Improvements in techniques has improved the utility of *ex post facto* research design.

Lord (1973) outlines eight limitations associated with *ex post facto* research designs as:

- The lack of control over independent variables;
- The difficulty in being certain that the relevant causative factor is included among the many factors under study;
- The single factor versus multiple interaction of factors cause of outcomes complication;

- The possibility that a phenomenon may result not only from multiple causes but also from one cause in one instance and from another cause in another instance;
- The difficulty of determining which factor is the cause and which is the effect, having determined the relationships;
- Over and above the fact that the relationship between two variables does not imply a cause-and-effect, the relationship may simple be an indication that the two variables are both related to a third unobserved variable;
- The vagueness and variability associated with classifying subjects into dichotomous groups for comparative purposes;
- The difficulty associated with controlled selection of subjects who are similar in all respects except in one variable.

In light of these difficulties, the general suggestion is that the results from *ex post facto* studies should be adopted with some caution. Moreover, Lord (1973) argues that *ex post facto* studies are open to manipulation by researchers with the aim of proving their subjective purposes. Yet, Lord (1973) maintains that, notwithstanding the weaknesses of the *ex post facto* design, it still plays a very important role in understanding humankind, human behaviour and the relationships between variables. It should always be noted that an *ex post facto* correlational study precludes the drawing of causal inferences from the significant path coefficients.

Having specified the model and collected the data, an attempt will be made to estimate the model, fit it to data and then make conclusions and inferences. If unsatisfactory absolute model fit is found, the conclusion would inevitably follow that the comprehensive model does not provide an acceptable explanation for the observed covariance matrix and thus the structural model does not satisfactorily explain variance in employee turnover intention model. The converse, however, is not true. If the covariance matrix from the estimated model parameters closely corresponds to the observed covariance matrix, it would not imply that the analysis postulated by the structural model necessarily must have produced the observed covariance matrix is valid. A high degree of fit between the observed and estimated covariance matrices would only imply that the process portrayed in the structural model provides one plausible explanation for the observed covariance/correlation matrix. The structural model could be considered corroborated.

3.4 SAMPLING AND RESEARCH PARTICIPANTS

The target population of this study was health practitioners of the South African Military Health Service (SAMHS). For financial and logistical reasons as well as time constraint reasons it may not be feasible and practical to obtain data from every subject in the target population or to assess each one. Under these circumstances, the more viable option is to focus on a limited representation of the population, called sample. A sample is a subsection of the target population that should be accurately representative of the population from which it is drawn to allow for the conclusions that are drawn from it to be generalised to the target population (Monette, Sullivan & DeJong, 2011). The sample characteristics are presented in Table 3.1 and are described in the next section.

Table 3.1

Sample profile

Variable	Frequency	Valid Percentage (%)
UNIT		
SAS Saldanha Sick Bay	8	2.5
1 Military Hospital	133	4.9
2 Military Hospital	65	2.9
3 Military Hospital	11	3.4
SAMHS Nursing College	108	33.2
Missing	0	0
GENDER		
Female	201	61.8
Male	123	37.8
Missing	1	.3
AGE		
Below 20 years	0	0
20 – 24 years	98	3.2
25 – 29 years	62	19.1
30 – 34 years	39	12.0
35 – 39 years	22	6.8
40 – 44 years	30	9.2
45 – 49 years	36	11.1
50+ years	37	11.4

Missing	1	.3
RACE		
Black	210	64.6
White	65	2.0
Coloured	36	11.1
Asians	12	3.7
Missing	2	.6
EDUCATION		
Secondary	6	1.8
Matric	77	23.8
Matric+ Certificate	60	18.5
Degree/Diploma	134	41.5
Honours/BTech	35	1.8
Masters/MTech/PhD	11	3.4
Missing	2	.6
TENURE		
Below 1 year	9	2.8
2 – 5 years	136	41.9
6 – 9 years	43	13.2
10 – 14 years	31	9.5
15 + years	75	23.1
Missing	30	9.2
RANK		
Non-Commissioned Officers	52	16.0
CO / Midshipman	128	39.9
2nd Lt/Ensign	2	.6
Lt/Sub Lt (Navy)	20	6.2
Captain/Lt (Navy)	66	2.6
Major/Lt Commander	28	8.6
Lt Colonel and higher	16	4.9
Civilians	9	2.8
Missing	4	1.2
CLASSIFICATION		
Scarce Skills	178	54.8
Non-scarce Skills	143	44.0
Missing	4	1.2
OCCUPATION		
Nurse	174	53.8
Dietician	7	2.2
Occupational Therapist	18	5.5

Psychologist	1	.3
Medical Practitioner	27	11.0
Pharmacist	6	1.8
Administrative	34	1.5
Physiotherapist	7	2.2
Biokeniticist	11	3.4
Dentist	2	.6
Dental Assistant	3	.9
Oral Health Practitioner	1	.3
Radiographer	10	3.0
Medical Technologist	8	2.5
Medical Orthotist/Prosthetist	5	1.5
Pharmacist Assistant	1	.3
Social Worker	1	.3
Speech Therapist	1	.3
Periodontist	1	.3
Missing	9	2.8
LANGUAGE		
Afrikaans	76	23.4
English	46	14.2
Ndebele	11	3.4
Shangaan/Tsonga	7	2.2
Sepedi	35	1.8
Sotho	22	6.8
Swazi	9	2.8
Tswana	44	13.6
Venda/Lembe	18	5.5
Xhosa	22	6.8
Zulu	32	9.8
Other	1	.3
Missing	2	.6

The study sample consisted of 325 healthcare military practitioners of which the majority, 4.9% and 33.2% were from 1 Military Hospital and SAMHS Nursing College, respectively. A cumulative percentage of 74.7% of the participants were from Pretoria Health Military Formation. In terms of gender distribution, the majority of the participants (61.8%) were female, while male participants made up 37.8% of the sample. The majority of the respondents fell in the 20–24-year old category (3.2%), followed by 19.1% for the 25–29-year-old category. Regarding race, the majority (64.6%) of the sample were blacks, followed by whites at 20%

and then the Asian and Coloured group with an accumulative percentage of 14.8%. Regarding educational levels, the majority of 41.5% of the subjects hold a degree/diploma qualification, followed by subjects with Matric level of education with 23.7%. Regarding rank, the majority (39.9%) of the subjects occupied Candidate Officer's rank. In terms of occupational application, the majority of respondents (53.5%) held nursing positions, followed by Medical Practitioners (8.3%). On the basis of the limited sample relative to the total population, it cannot be claimed that this sample is representative of the total target population, nor that the results and conclusions could be generalised.

A non-probability convenience sampling technique was used for data collection. Structural equation modelling (SEM) is the primary data analysis technique that will be used in this study. SEM analysis requires a large sample in order to achieve enough statistical power so that meaningful results and accurate parameter estimates are obtained (Quintana & Maxwell, 1999). With regard to an acceptable number of subjects, Weston and Gore (2006) recommend a minimum of at least 200 subjects for any SEM analysis. This study sufficiently met this requirement by obtaining a final sample of 325 participants.

3.5 DATA COLLECTION AND PROCEDURE

The process of data collection commenced by submitting a written request for organisational authority to various levels of the Department of Defence (DoD) command structure, which was processed through the Faculty of the Military Science (FMS) of Stellenbosch University (SU), situated at the Military Academy, a military unit of the SANDF, where the researcher is employed. The request was initially received by the Training Command Formation for acknowledgements and recommendations, and ultimately by Chief Defence Intelligence where the final authorisation to conduct research within the organisation was subsequently obtained. The request clarified the background, the objectives, the envisaged sample, methodology and procedure of the study as well as the duration, purpose and presentation of results. Further correspondence and liaison with the individual military units was then entered into, setting and clarifying terms and conditions with Commanding Officers of targeted military sites/areas (commonly referred to as military units) and sending them the agreement that the researcher had already entered into with Chief Defence Intelligence.

Data was collected on site in the six health military units by the researcher. A survey through questionnaire was conducted by the researcher, who administered them in person. After discussing and agreeing on the logistics with the Commanding Officers of the military units, the researcher availed himself in person in five respective military sites/units (as indicated in Table 3.1). In four of these units, an agreement was reached that the respondents would come in different groups to the researcher in a central location, whilst for the other units, the researcher had to see the respondents in a single group because of the preference of the members involved and a need not to disrupt the normal functioning of the units. Variations of data collection methods were used to accommodate the needs of the different units. Before issuing questionnaires, the researcher explained their content, aim, the fact that participation was voluntary and that participants could withdraw their participation at any stage as well as the ethical considerations before the respondents were requested to give an informed consent. Detailed ethical considerations that were adhered to are explained in the next section.

3.6 ETHICAL CONSIDERATIONS

When conducting social research, researchers need to anticipate the ethical issues that may arise during their studies. A study carried by a researcher who exhibits moral integrity is likely to be accorded validity and trustworthiness. Social research typically involves human subjects who need protection from abuse of any form. Broom (2006) maintains that upholding high ethical standards is extremely pivotal for protecting the respondents and researchers themselves; improving the quality of data collected; and ensuring that researchers have access to respondents in the future. According to Hogan (2007) ethics deals with the principles or norms of behaviour. Researchers need to ensure that neither physiological nor psychological harm of any form takes place on the part of the study participants. This current study adhered to the ethical guidelines of the University of the Western Cape (UWC) as stipulated in the document entitled *Guidelines for Drawing up an Informed Consent Document* prepared by the Human and Social Science Research Ethics Committee (HSSREC, not dated). Since the researcher is a registered psychologist, the ethical guidelines of the Health Professions Council of South Africa (HPCSA) as well as the prescriptions of the Health Act (2004) were strictly adhered to. Amongst a number of moral/ethical challenges that needed to be observed, the following are the most important.

The HSSREC (undated) prescribes that researchers in Social and Humanities adhere to the following guidelines when drawing an informed consent letter, as well as in practice:

- *Informed consent* – is a norm in which sample subjects of a research agree to participate voluntarily in a research project based on reasonable understanding of risks and benefits (Babbie, 2007; Hogan, 2007). Informed consent entails providing the subjects with information about the purpose of the study, how the data will be used, what participation will be required of them, contact details of the researcher and the supervisor/s for additional information, the time required of them, and their right to withdraw consent at any time they wish to do so. Broom (2006) stresses that gaining informed consent is the most important aspect of ethical considerations in research. The informed consent letter for this current research was drawn based on the guidelines and the requirements of the HSSREC (undated) of UWC. Nonetheless, this study was officially confirmed to entailed minimal risks if any at all for the participants by the Research Ethics Committee of the University of the Western Cape.
- *Privacy, anonymity and confidentiality*– the proposed conditions of how the researcher will guarantee privacy, anonymity and confidentiality should be clearly spelt out in the informed consent document/letter. Broom (2006) regards privacy and confidentiality as the most obvious but very important requirements of any research. Privacy implies that the researcher takes all the necessary precautions to respect not only the personal and private spaces and information of the participants but also guarantees their anonymity and confidentiality. Confidentiality means that attribution of comments and responses to identifiable individuals in reports or presentations is avoided, whilst anonymity means that the researcher ensures that the identities of the participants are not known outside the research team (Ritchie & Lewis, 2003). The requirements of privacy, anonymity and confidentiality are also important considerations of the HSSREC and were included in the informed consent document and practice in this research.
- *Respect for participants* includes the need for researchers to ensure preservation of *dignity, rights, safety* and *well-being* of subjects at all times and ensuring that they are not exposed to any harm whatsoever. Broom (2006, p. 152) reckons that "at the basic level, in order for a research project to be ethical, the dignity, rights, safety and well-being of participants must be the primary consideration". Furthermore, no deception of any form should be part of the study.

- *Further ethical requirements* – these include *beneficence and non-maleficence*, which entail that "psychologists strive to benefit those with whom they work and take care to do no harm" (Hogan, 2007). In this regard the HSSREC document requires that the informed consent document should mention the potential benefits that could be derived from participating in the study.

The guidelines of the HSSREC (undated) provided guidelines for the drawing up of the informed consent document and its contents. Consequently, ethical approval of UWC Research Ethics Committee was obtained prior to the start of the research. Utmost effort was done to incorporate all of the above-mentioned ethical requirements in practice during data collection and thereafter as required by the ethics committee of UWC.

3.7 MEASURING INSTRUMENTS

This section describes the psychometric properties of the scales that were used to collect data for this research endeavour.

3.7.1 Turnover intention

A 4-item Measure of Intention to Quit developed by Price and Mueller (1986) was used to measure employee turnover intention, which attained an internal consistency ($\propto$ = .83), and acceptable evidence of validity obtained through factor loadings (ranging from .41 to .79), further corroborated by a negative correlation with job satisfaction (r = -.58). Further findings by Markowitz (2012) also reported a good Cronbach Alpha of .89 for internal reliability of this scale. A sample of a positive item is: "Under no circumstances will I voluntarily leave this organisation before I retire", and an example of a reverse-coded item is: "I plan to leave this organisation as soon as possible."

3.7.2 Culture

For this study, culture is conceptualised in terms of Hofstede's (1980, 1984) cultural value dimensions, albeit at individual level (Yoo, Donthu and Lenartowicz, 2011) as described in the previous section. An instrument called Cultural Value Scale (CVSCALE) developed by Yoo,

et al. (2011) was used to measure culture at individual level. The psychometric properties of the measures of the five cultural dimensions are reported below.

3.7.2.1 Collectivism

Collectivism will be measured with a 6 – item Collectivism subscale from the CVSCALE (Yoo *et al.* 2011). Internal consistency reliability for the Collectivism subscale was estimated, using item-to-total correlation, which ranged from .52 to .60 with a good Cronbach Alpha coefficient of .81, while the construct validity was confirmed with relatively high factor loadings that emulated Hofstede's original study, ranging from .67 to .78 (Prasongsurkan, 2009, p.8). A sample item is: "Individuals should only pursue their goals after considering the welfare of the group."

3.7.2.2 Power distance

Power distance will be measured with a 5–item power distance individual subscale from the CVSCALE (Yoo *et al*. 2011). Internal consistency reliability for the power distance dimension was estimated, using item-to-total correlation, which ranged from .29 to .46 with a relatively low Cronbach Alpha coefficient of .63, while the construct validity was confirmed with factor loadings that emulated Hofstede's original study, ranging between .50 to .74 (Prasongsurkan, 2009). A sample item is: "People in higher positions should make decisions without consulting people in lower positions."

3.7.2.3 Uncertainty avoidance

Uncertainty avoidance was measured with a 5–item individual uncertainty avoidance subscale from the CVSCALE (Yoo *et al*. 2011). Internal consistency reliability for the uncertainty avoidance dimension was estimated, using item-to-total correlation, which ranged between .52 to .63 with a relatively good Cronbach Alpha coefficient of .81, while construct validity was confirmed with factor loadings that emulated Hofstede's original study, ranging from .52 to .63 (Prasongsurkan, 2009, p.8). A sample item is: "It is important to have instructions spelled out in detail so that I always know what I am expected to do."

3.7.2.4 Masculinity

Masculinity was measured with a 4–item individual masculinity subscale from the CVSCALE, which showed acceptable convergent validity as reflected in composite reliability estimate of .68 (Yoo *et al*. 2011). Internal consistency reliability for the masculinity scale was estimated with item-to-total correlation, which ranged from .24 to .48 with a relatively low Cronbach Alpha coefficient of .61, while construct validity was confirmed with factor loadings that emulated Hofstede's original study, ranging from .49 to .76 (Prasongsurkan, 2009, p. 8). A sample item is: "Solving difficult problems usually requires an active, forcible approach, which is typical of men."

3.7.2.5 Long-term orientation

Long-term orientation will be measured with a 6–item individual long-term orientation subscale from the CVSCALE which showed acceptable convergent validity as reflected by the composite reliability estimate of .70 (Yoo *et al*. 2011). Internal consistency reliability for the long-term orientation was estimated with item-to-total correlation, which ranged from .49 to .70 with an acceptable Cronbach Alpha coefficient of .85, while construct validity was confirmed with factor loadings that corresponded to Hofstede's original study, ranging from .60 to .83 (Prasongsukarn, 2009, p. 8). A sample item is: "It is important for me to give up today's fun for success in the future."

3.7.3 Perceived Organisational Support

Perceived Organisational Support (POS) was measured with a short-version, 8-item measure that was developed by Dawley, Houghton and Buckley (2010) from the original 36-item POS measure of Eisenberger, Huntington, Hutchinson and Sowa (1986) by selecting eight items that loaded the highest onto POS construct. The original scale had an acceptable internal consistency with a Cronbach Alpha of .97 while the 8-item scale exhibited an internal consistency with a Cronbach Alpha value of .89. A sample positive item is: "The organisation values my contribution to its well-being" and a sample reverse-coded item is "Even if I did the best job possible, the organisation would fail to notice me."

3.7.4 Perceived Supervisory Support

The ten-item measure of PSS that was used in this study was adopted from Anderson, Coffey and Byerly (2002) with a reported satisfactory internal consistency indicated by an acceptable Cronbach Alpha coefficient of .89. A sample item is: "My supervisor accommodates me when I have a family or personal business to take care of, for example medical appointments, meeting with child's teacher, etc."

3.7.5 Job satisfaction

Job satisfaction was measured by means of a 10–item, originally two-factor structure (intrinsic versus extrinsic factors) Warr, Cook and Wall's (1979) Job Satisfaction Scale (JSS) (Heritage, Pollock & Roberts, 2015). Warr *et al.*'s (1979) original study reported sufficient internal consistency Cronbach Alpha coefficients for intrinsic factor (α ranging from .79 to .85) and extrinsic job satisfaction factor (α ranging from .74 to .78) (Heritage *et al*. 2015). Subsequent validation study of the instrument by Heritage *et al.* (2015) did not succeed in supporting the multidimensionality of the JSS in terms of the intrinsic and the extrinsic subscales, but instead supported and recommended the use of the JSS as a unidimensional, total scale score instrument. This recommendation was adopted for the purpose of this study, JSS was treated as a unidimensional scale. Furthermore, Van Saane, Verbeek and Frings-Dresden (2003), cited in Giraldo-O'Meara, Marin-Garcia and Martinez-Gomes (2014) reported adequate internal consistency coefficients of the JSS with Cronbach Alpha coefficients ranging from .54 to .91. A study by Hincapie, Yandow, Hines Martineau and Warholak (2012) determined a high Cronbach's Alpha coefficient of .90 and model reliability of .83 for the JSS. Furthermore, Nahar, Hossain, Rahman and Bairagi (2013) reported adequate concurrent (r = .32) and congruent (r = .54) validities for the JSS. A sample item is: "Taking everything into consideration, how do you feel about your work?"

3.7.6 Organisational Commitment

Organisational commitment was measured by means of a 15–item Organisational Commitment Questionnaire (OCQ) developed by Mowday, Steers and Porter (1979). There is evidence of good to acceptable psychometric properties of the OCQ as reported by Mowday et al. (1979). The average item-total correlations ranging from .36 to .72 and the Cronbach Alpha coefficients ranging from .82 and .93 among different employees from different sectors, offered

evidence of good and acceptable internal reliability. Furthermore, positive total-item correlations with a median of .64 and negatively worded items that correlated less with the total score than the positively worded items, together with the factor analysis rotation that resulted in a single factor solution, provided evidence that the 15 items of the OCQ are relatively homogenous with respect to the underlying attitude construct of organisational commitment they measured. Test-retest reliability with coefficients ranging from .53 to .75 for establishing OCQ stability over time compared favourably with previous attitudinal studies (Mowday et al. 1979).

Mowday *et al.* (1979) further reported evidence of validity of the OCQ. Evidence for convergent reliability was provided by moderate to high correlation coefficients between OCQ and Organisational Attachment Questionnaire (r ranging from .63 to .74), behavioural intent to remain, motivational force to perform and intrinsic motivation (r ranging from .35 to .45), central life of employees and supervisor ratings of commitment. Evidence for discriminant validity were provided by correlating and comparing the OCQ with job involvement (r ranging from .30 to .56), career satisfaction (r ranging from .39 to .40) and job satisfaction (r ranging from .41 to .68), with indices providing acceptable values. A sample item is: "This organisation really inspires the very best in me in the way of job performance". A sample reverse-coded item is: "I could just as well be working for a different organisation as long as the type of work was similar."

3.8 STATISTICAL ANALYSIS

3.8.1 Missing Values

The persistent problem of missing data is endemic to social, human and other related sciences where human respondents either miss items/responses intentionally or otherwise. Missing data can result in negative effects when the data is statistically analysed and/or when interpretations and conclusions are made (Schumacker & Lomax, 2010). For example, missing data can result in biased estimates, reduced or exaggerated statistical power and distortions that can lead to invalid conclusions (Acock, 2005). The problem of missing data would be compounded by the fact that SEM is a large data technique that is profoundly affected by the number of respondents compared to the estimates that are made in the data analysis. Hence, simply discarding the questionnaires with missing data may not always be the best solution for dealing with missing

values in SEM studies. Acock (2005) recommends that optimum strategies for dealing with missing data need to be employed to reach valid conclusions, and that the strategy should take into consideration the nature, trend and type of the missing data.

Literature has identified three types of missing data that could determine the most appropriate strategy to deal with said data (Acock, 2005; Schreiber, 2008; Schumacker & Lomax, 2010; Weston & Gore, 2006). These are:

- Missing at random (MAR) – regarded as a less problematic type MAR is evident when "the likelihood of missing data on the variable is not related to the participant's score on the variable, after controlling for other variables in the study" (Acock, 2005, p. 1014).
- Missing completely at random (MCAR) – Such data is regarded as a less problematic missing data type, MCAR happens when data/values are missing randomly according to no specific systematic trend.
- Non-ignorable missing values data/Not missing at random (NMAR) – This is evident when data/values are missing systematically, e.g. e on one attribute/variable because the respondents either do not have an appropriate response for it, missing as a function of another variable, or through attrition.

Schumacker and Lomax (2010) reckon that researchers have the options of either deleting the missing cases, replacing/imputing the missing data or using robust methods that compensate for missing data. Different deletion and imputation/substitution methods are:

- *Listwise deletion* – applied when all the responses with missing data on any variable are deleted. Schreiber (2008) reckons that *Listwise deletion* is most appropriate when data are MCAR. Obviously, the disadvantage of this strategy is the possibility of losing a large amount of data.
- *Pairwise Deletion* – this strategy entails deleting the data associated with the respondents who have missing data only on the measure item/s or variable/s that will be utilised for purposes of the study.

- *Mean Substitution* – this strategy entails substituting the missing values with the mean of that variable. Roth (1994) demonstrates that mean substitution can affect variance estimates, parameter estimates and the degrees of freedom.
- *Expectation Maximisation (EM)* – entails finding the expected value on the basis of maximum likelihood parameter estimation.
- *Maximum Likelihood (ML) and Full Information Maximum Likelihood (FIML)* – specifically used in SEM packages, these strategies entail not imputing missing values but rather to "use all the available information to provide a maximum likelihood estimation" (Acock, 2005, p. 1021). Schreiber (2008) is of the opinion that FIML is best suited when data are MAR or non-ignorable.
- *Multiple Imputation (MI)* – this procedure entails simultaneously handling moderate missing data at random and involves substituting the missing data with either the means or the matching response patterns-scores or with data from other subjects with similar scores across other variables (Carter, 2006; Schumacker & Lomax, 2010). Unlike deletion procedures for handling missing data, MI does not compromise the sample by reducing it, but retains all the responses and renders the data usable for statistical analysis.

LISREL has different strategies for handling missing variables, including FIML, EM, and MI, most of them available in LISREL-Prelis (Diamantopoulos & Siguaw, 2000; Schumacker & Lomax, 2010). For this current study, data is missing at random and MI would be used for imputing missing values.

3.8.2 Item Analysis

The fundamental psychometric properties of reliability and validity in I/O measurement are sacrosanct and need to be observed at all times. In order to minimise measurement error (Tavakol & Dennick, 2011), item analysis will be performed on the measures of the study. Item analysis could be defined as an analytical technique used to establish whether the factor structure of a measure is stable in terms of the interrelatedness of items. Reliability is a psychometric condition that seeks to establish the consistency of sample's patterns to response patterns across items of a measure (Helms, Henze, Sass & Mifsud, 2006). A form of reliability

analysis called item analysis is oftentimes used to establish the reliability of a measure of a construct.

According to Gorsuch (1997), the goal of item analysis is to identify those items that significantly define and are highly related to a construct by determining how each item is related to the construct as well as the other items. Internal consistency with the use of Cronbach Alpha coefficient implies establishing the extent to which there is internal agreement amongst the items that are purportedly measuring a single construct/factor/variable, or the extent to which each item is correlated with the remaining items of the scale (Eltayeb, Staal, Kennes, Lamberts & de Bie, 2007). Internal consistency/reliability of the measures regarding the acceptability of a measure will be reported based on Table 3.2. Individual items will be scrutinised in terms of the extent to which they compromise the scale by examining the extent to which each is correlated with the total of the scale, known as item-total correlation statistics (SPSS, 2016). Item analysis will be conducted on all the measures that were used in this study, including the CVSCALE and its five measures of cultural value dimensions of Collectivism, power distance, uncertainty avoidance, femininity, and long-term orientation. Item analysis will also be conducted on measures of job satisfaction, organisational commitment, perceived organisational support, perceived supervisory support as well as turnover intention.

Table 3.2

George and Mallery's (2003) rules of thumb for interpreting Cronbach Alpha

Alpha Value	Interpretation
> .90	Excellent
> .80	Good
> .70	Acceptable
> .60	Questionable
> .50	Poor
< .50	Unacceptable

Note. Adapted from R.R. Gliem, R.R., & Gliem, J.A. (2003). *Calculating, interpreting, and reporting Cronbach's Alpha reliability coefficient for Likert-type scales*. Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education.

Though Gliem and Gliem (2003) provide George and Mallery's (2003) rules of thumb for interpreting Cronbach Alpha, it should be emphasised that different interpretational schema may suffice, for example, Ponterotto and Ruckdeschell (2007) argue that Cronbach Alpha ranging between .60 and .70 may be deemed satisfactory and useful for research reliability. The following interpretational schema are pivotal in item analysis and will be used to make decisions about the reliability and suitability of items in measuring the constructs of the current study.

- Although there are different views on the acceptable values of the Cronbach Alpha coefficient, the guidelines given by Gliem and Gliem (2003) as demonstrated in Table 3.1 will be followed in the present study.
- A rule-of-thumb is that Corrected Item-Total Correlation values should be at least .30 (Pallant, 2016).
- Guilford's guidelines (Danhauser, 2007) will be used for interpreting the strength of the relationships between the items (inter-item correlations) as depicted in Table 3.3.

Table 3.3

Guilford's scale for interpreting the strength of correlations

Correlation value			Interpretation
<.20	=	<4%	Slight, almost negligible relationship
.20-.40	=	4-16%	Low correlation, definite but small relationship
.40-.70	=	16-49%	Moderate correlation, substantial relationship
.70-.90	=	49 – 81%	High correlation, marked relationship
> .90	=	81%+	Very high correlation, very dependable relationship

Note. Adapted from Danhauser, Z. (2007). The relationship between servant leadership, follower trust, team commitment and unit effectiveness. *Unpublished doctoral thesis*. Stellenbosch: Stellenbosch University.

3.8.3 Dimensionality analysis using exploratory factor analysis

Dimensionality analysis is an analytical technique used to determine whether each set of indicators/items actually represent the existence of one construct (Steenkamp & van Trijp, 1991). Anderson and Gerbing (1988) argue that multidimensionality or lack of uni-dimensionality can distort measurement, thus resulting in error of measurement. Establishing

unidimensional measurement is pivotal in theory testing and development. Furthermore, Helms *at al.*, (2006) argues that if sample participants' responses to scale items are multidimensional, the obtained reliability coefficients may be negative. The dimensionality analysis of the scales used for this research will be conducted with the aim of confirming the dimensionality of the scales, which is a required condition for developing item parcels[1]. Treating a multidimensional scale as a unidimensional scale, and *vice versa*, could result in misleading results when conducting data analysis and results interpretation. SPSS (2016) will be used to conduct scale dimensionality analysis on structural validity of the measures. The following guidelines will be used for this purpose:

- Kaiser's criterion, which determines that only components that have an eigenvalue of 1 or more, will be used to determine number of factors to extract from a measure (Pallant, 2016; Suhr & Shay, 2009).
- Scree plot indicates the number of factors from a solution and is interpreted on the basis of the change in the elbow of a plot; only components above the elbow are retained in the final solution (Suhr & Shay, 2009)
- Acceptability or significance of factor loadings will be adjudged on the basis of > .30 criterion as the acceptable value (Pallant, 2016; Suhr & Shay, 2009).
- Cross-loading of items will be based on the criterion of loading values > .32 on at least two factors, thus rendering an item flawed and a candidate for deletion (Cabrera-Nguyen, 2010; Suhr & Shay, 2009; Yong & Pearce, 2013), and will be excluded if the difference between the higher and the lower loading is < .25 (Nunnally & Bernstein, 1994; Tabachnick & Fidell, 2007).
- Bartlett's Test of Sphericity evaluates suitability for factor analysis of the correlation matrix based on the significance level of $p < .05$ (Pallant, 2016).
- Communalities are regarded as strong if all of them are equal or above .80 but is acceptable if above .40 and unacceptable if below .40 (Pallant, 2016).
- Initial suspicion of determination of multicollinearity will be based on the inspection of the correlation matrix among the items with $r < .30$ thus flagging the item for deletion. However, $r > .90$ demonstrates the possibility of multicollinearity (Yong & Pearce, 2013).

[1]To create item parcels, the various dimensions were treated as separate latent variables and not sub-dimensions of the original construct. By virtue of the separate dimensions being unidimensional entities, two random item parcelling were created for each latent variable.

The next section examines structural equation modelling (SEM) which is the primary analysis tool utilised in this research endeavor.

3.8.4 Structural equation modelling (SEM)

Quintana and Maxwell (1999) attribute considerable and widespread use of SEM to its broad utility. That includes recent innovations in the development of the procedures associated with SEM. There are a number of advantages of SEM, firstly, SEM allows for greater flexibility in operationalising complex models that would be rather difficult to operationalise with conventional data analysis techniques. Secondly, SEM enables researchers to theorise latent variables that are presumed to be the underlying determinants of observed manifest variables.

Reisinger and Turner (1999) further explicate the advantages of using SEM as follows: first, though not similar but sharing some common principles, SEM is akin to combining factor analysis and multiple regression simultaneously in an analysis; second, SEM has the capacity of solving causal relationships between latent constructs that are measured by observed measures; third, unlike traditional analysis approaches, SEM accounts for error in construct measurement. Lastly, SEM not only evaluates the overall model fit, but also allows for evaluation of individual paths/linkages between individual variables.

Schumacker and Lomax (2010) provide a further four major reasons why an increase in the application of SEM in research analysis is evident. These are:

- Researchers are becoming more aware of the need to use multiple observed variables in order to better understand their field of scientific inquiry;
- There exists a greater need to use reliable and valid instruments in empirical research in order to incorporate rigour in scientific research;
- There is a maturity in SEM analysis, and user-friendliness associated with the current crop of SEM programmes.

Literature on SEM (e.g. Diamantopoulos, 1994; Diamantopoulos & Siguaw, 2000; Quintana and Maxwell, 1999; Reisinger and Turner, 1999; Schumacker & Lomax, 2010) agrees that typical SEM steps are as follows:

- Model specification
- Model identification
- Model estimation
- Model testing

Further elucidation on the above-mentioned SEM steps will be offered in subsequent sections. LISREL (for Linear Structural Relations, version 8.80) (Jöreskog & Sörbom, 2006) is a multivariate covariance structure analysis programme. It combines confirmatory factor analysis, derived from psychometric theory and structural equation modelling, which in turn is derived from econometric theory (Reisinger & Turner, 1999). Confirmatory factor analysis will be used for the SEM analysis in confirming the validity of the CVSCALE measure in this current research undertaking. The next section reviews the general steps of SEM.

3.8.4.1 Model Specification

Model specification is the first step of SEM and could be described from two perspectives: firstly, model specification can be viewed as a step that entails "utilising all the available theory, research, and information for developing a theoretical model" (Schumacker & Lomax, 2010:62). At this level, the purpose of a researcher is to build a scientifically sound and theory-based model that should be confirmed with variance-covariance data. Theory is used to make decisions regarding which constructs or variables to include or exclude in the model and what is the nature of the relationships and parameters amongst the variables included. Model specification also entails developing and generating an implied theoretical model. Proper specification of the model prevails when a researcher achieves the closest estimation or fit between the implied theoretical model and the sample covariance; put differently, the implied sample covariance should be reproduced sufficiently by the implied theoretical model (Schumacker & Lomax, 2010). The main purpose of an applied researcher is to avoid model misspecification which generates specification error, evident when the true model that

generated the data deviates from the implied theoretical model. Model misspecification and its subsequent specification error would consequentially lead to poor estimation and model fit.

At another level, Lavee (1988) refers to model specification as a step involving translation of hypothesised, theory-based interrelations amongst the variables of the study into mathematical and statistical equations. Generally, SEM models have two parts, *i.e.* the structural and the measurement model. The principles guiding specification of both these models are the same.

3.8.4.2 Structural Model

SEM studies commence with model conceptualisation through which a researcher identifies the range of variables to include in the final model, with the objective of avoiding and/or minimising misspecification by excluding variables that do not add value. The proposed individual culture work-related attitude-perceived support- turnover intention structural model is illustrated in Figure 3.2.

The proposed structural model can be portrayed as a set of structural equations representing the research hypotheses as follows:

$\eta_1 = \gamma_{11}\xi_1 + \beta_{13}\eta_3 + \beta_{14}\eta_4 + \zeta_1$---------- (1)

$\eta_2 = \gamma_{21}\xi_1 + \beta_{21}\eta_1 + \beta_{24}\eta_4 + \zeta_2$---------- (2)

$\eta_3 = \gamma_{31}\xi_1 + \zeta_3$---------- (3)

$\eta_4 = \beta_{43}\eta_3 + \zeta_4$---------- (4)

$\eta_5 = \gamma_{51}\xi_1 + \gamma_{51}\xi_2 + \gamma_{53}\xi_3 + \gamma_{54}\xi_4 + \gamma_{55}\xi_5 + \beta_{51}\eta_5 + \beta_{52}\eta_2 + \beta_{53}\eta_3 + \beta_{54}\eta_4 + \zeta_4$---------- (5)

$\eta = B\eta + \Gamma\xi + \zeta$---------- (6)

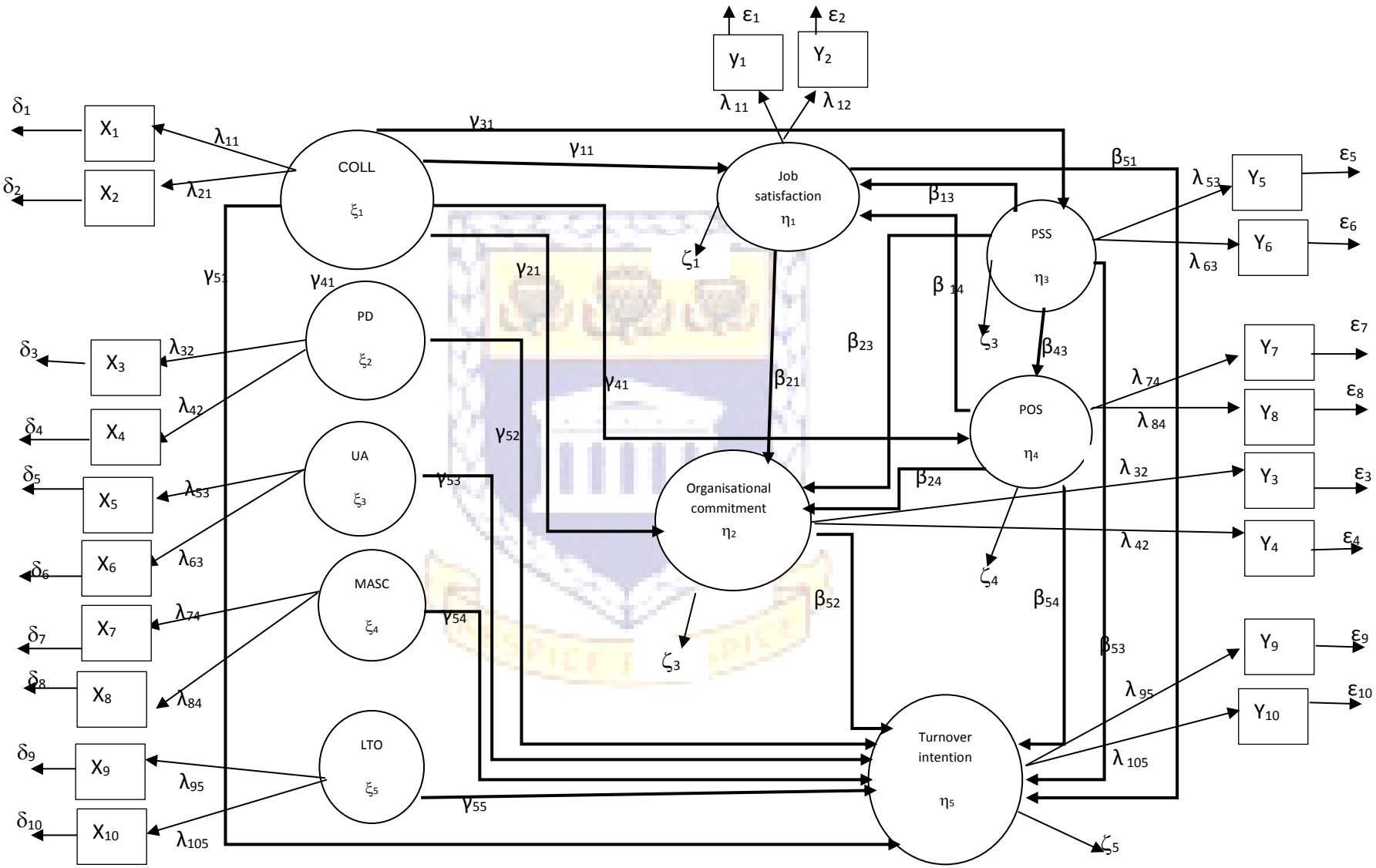
$$\begin{pmatrix}\eta_1\\ \eta_2\\ \eta_3\\ \eta_4\\ \eta_5\end{pmatrix} = \begin{pmatrix}0 & 0 & \beta_{13} & \beta_{14}\\ \beta_{21} & 0 & 0 & \beta_{24}\\ 0 & 0 & 0 & 0\\ 0 & 0 & \beta_{43} & 0\\ \beta_{51} & \beta_{52} & \beta_{53} & \beta_{54}\end{pmatrix}\begin{pmatrix}\eta_1\\ \eta_2\\ \eta_3\\ \eta_4\end{pmatrix} + \begin{pmatrix}\gamma_{11} & 0 & 0 & 0 & 0\\ \gamma_{21} & 0 & 0 & 0 & 0\\ \gamma_{31} & 0 & 0 & 0 & 0\\ \gamma_{41} & 0 & 0 & 0 & 0\\ \gamma_{51} & \lambda_{52} & \lambda_{53} & \lambda_{54} & \lambda_{55}\end{pmatrix}\begin{pmatrix}\xi_1\\ \xi_1\\ \xi_1\\ \xi_1\\ \xi_1\end{pmatrix} + \begin{pmatrix}\zeta_1\\ \zeta_1\\ \zeta_1\\ \zeta_1\\ \zeta_1\end{pmatrix} \quad \text{-- (7)}$$

The structural model can also be portrayed mathematically in terms of a series of matrices. The structural model is defined by the following three matrices and three vectors:

- A 5 x 5 Γ (gamma)- matrix of path/regression coefficients γ_{ij} describing the strength of the regression of η_i on ξ_j in the structural model;
- A 5 x 5 symmetrical B (beta)-matrix of regression/ path coefficients (β_{ij}) describing the strength of the regression of η_i on η_j in the structural model;
- A 5 x 5 symmetrical matrix Φ (phi)-matrix of variance and covariance terms describing the variance in (Φ_{ii}) and covariance between (Φ_{ij}) the exogenous latent variables ξ_i and ξ_j;
- A 5 x 1 ξ(ksi) column vector of exogenous latent variables;
- A 5 x 1 η (eta) column vector of endogenous latent variables;
- A 5 x 1 ζ (zeta) column vector of residual error terms.

More specifically, the hypothesised causal relationships depicted in Figure 3.2 can be expressed in matrix form as equation 6 and 7.

Fig 3.2 The proposed individual culture-work-related attitudes - turnover intention measurement model



3.8.4.3 Endogenous measurement model

Indicator variables, to reflect the five endogenous latent variables, were created. Because of the large number of items, which would not have been accepted by LISREL, ten item parcels, as reflected in equations 8 to 17, were generated to reflect the endogenous measurement model. The complete measurement model is schematically depicted in Figure 3.2.

The proposed endogenous measurement model, consisting of dependent variables that are supposedly caused/effected by independent variables, can be expressed as the following set of measurement equations:

$y_1 = \lambda_{11}\eta_1 + \varepsilon_1$ ---------- (8)

$y_2 = \lambda_{21}\eta_1 + \varepsilon_2$ ---------- (9)

$y_3 = \lambda_{32}\eta_2 + \varepsilon_3$ ---------- (10)

$y_4 = \lambda_{42}\eta_2 + \varepsilon_4$ ---------- (11)

$y_5 = \lambda_{53}\eta_3 + \varepsilon_5$ ---------- (12)

$y_6 = \lambda_{63}\eta_3 + \varepsilon_6$ ---------- (13)

$y_7 = \lambda_{74}\eta_4 + \varepsilon_7$ ---------- (14)

$y_8 = \lambda_{84}\eta_4 + \varepsilon_8$ ---------- (15)

$y_9 = \lambda_{95}\eta_5 + \varepsilon_9$ ---------- (16)

$y_{10} = \lambda_{105}\eta_5 + \varepsilon_{10}$ ---------- (17)

STRUCTURAL MODEL EXPRESSED AS A MATRIX EQUATION

$$\begin{pmatrix} y_{01} \\ y_{02} \\ y_{03} \\ y_{04} \\ y_{05} \\ y_6 \\ y_{07} \\ y_8 \\ y_9 \\ y_{10} \end{pmatrix} = \begin{pmatrix} \lambda_{11} & 0 & 0 & 0 & 0 \\ \lambda_{21} & 0 & 0 & 0 & 0 \\ 0 & \lambda_{32} & 0 & 0 & 0 \\ 0 & \lambda_{42} & 0 & 0 & 0 \\ 0 & 0 & \lambda_{53} & 0 & 0 \\ 0 & 0 & \lambda_{63} & 0 & 0 \\ 0 & 0 & 0 & \lambda_{74} & 0 \\ 0 & 0 & 0 & \lambda_{84} & 0 \\ 0 & 0 & 0 & 0 & \lambda_{95} \\ 0 & 0 & 0 & 0 & \lambda_{105} \end{pmatrix} \begin{pmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \\ \xi_4 \\ \xi_5 \end{pmatrix} + \begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \varepsilon_3 \\ \varepsilon_4 \\ \varepsilon_5 \\ \varepsilon_6 \\ \varepsilon_7 \\ \varepsilon_8 \\ \varepsilon_9 \\ \varepsilon_{10} \end{pmatrix}$$

3.8.4.4 Exogenous measurement model

The proposed exogenous model, consisting of independent variables that are not caused/affected by any other variables, can be expressed as the following set of equations:

$x_1 = \lambda_{11}\xi_1 + \delta_1$ ----------(18)

$x_2 = \lambda_{21}\xi_1 + \delta_2$ ----------(19)

$x_3 = \lambda_{32}\xi_2 + \delta_3$ ----------(20)

$x_4 = \lambda_{42}\xi_2 + \delta_4$ ----------(21)

$x_5 = \lambda_{53}\xi_3 + \delta_5$ ----------(22)

$x_6 = \lambda_{63}\xi_3 + \delta_6$ ----------(23)

$x_7 = \lambda_{74}\xi_4 + \delta_7$ ----------(24)

$x_8 = \lambda_{84}\xi_4 + \delta_8$ ----------(25)

$x_9 = \lambda_{95}\xi_5 + \delta_9$ ----------(26)

$x_{10} = \lambda_{10,5}\xi_5 + \delta_{10}$ ----------(27)

The set of exogenous measurement equations can be represented as matrix equation 29 below.

$$\begin{pmatrix} X_{01} \\ X_{02} \\ X_{03} \\ X_{04} \\ X_{05} \\ X_{06} \\ X_{07} \\ X_{08} \\ X_{09} \\ X_{10} \end{pmatrix} = \begin{pmatrix} \lambda_{11} & 0 & 0 & 0 & 0 \\ \lambda_{21} & 0 & 0 & 0 & 0 \\ 0 & \lambda_{32} & 0 & 0 & 0 \\ 0 & \lambda_{42} & 0 & 0 & 0 \\ 0 & 0 & \lambda_{53} & 0 & 0 \\ 0 & 0 & \lambda_{63} & 0 & 0 \\ 0 & 0 & 0 & \lambda_{74} & 0 \\ 0 & 0 & 0 & \lambda_{84} & 0 \\ 0 & 0 & 0 & 0 & \lambda_{95} \\ 0 & 0 & 0 & 0 & \lambda_{105} \end{pmatrix} \begin{pmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \\ \xi_4 \\ \xi_5 \end{pmatrix} + \begin{pmatrix} \delta_1 \\ \delta_2 \\ \delta_3 \\ \delta_4 \\ \delta_5 \\ \delta_6 \\ \delta_7 \\ \delta_8 \\ \delta_9 \\ \delta_{10} \end{pmatrix}$$

Full LISREL model

The full LISREL model for single samples, for deviations about the means, can be expressed mathematically as the following three equations (Jöreskog, 2003):

- The structural model:

  $\eta = B\eta + \Gamma\xi + \zeta$---------- (28)

- The measurement model for y:

  $y = \Lambda_y\eta + \varepsilon$---------- (29)

- The measurement model for x:

  $x = \Lambda_x\xi + \delta$---------- (30)

Jöreskog (2003) suggests that the random components in the LISREL model are assumed to satisfy the following minimum assumptions:

- ε is uncorrelated with η;
- δ is uncorrelated with ξ;
- ζ is uncorrelated with ξ; and
- ζ is uncorrelated with ε and δ.

3.8.4.5 Model Identification

Reisinger and Turner (1999, p.79) define model identification as "the extent to which the information provided by the data is sufficient to enable parameter estimation". This definition of model identification has two important implications. First, model identification cannot proceed without model or parameter estimation. Parameter estimation cannot proceed without model identification (Schumacker & Lomax, 2010). Second, model identification is concerned with determining the sufficiency of information to proceed to the next step of model estimation. Schreiber (2008) and Schumacker and Lomax, (2010) reckon that in solving the identification problem, a researcher has to determine if there can be unique parameter estimates from the sample data contained in the sample variance-covariance S and the theoretical model implied by the population variance-covariance matrix. The difference between the number of distinct values in the sample variance-covariance matrix and the number of free parameters to be estimated in a model is referred to as degrees of freedom (Schumacker & Lomax, 2010). According to Shah and Goldstein (2006), the formula for calculating the degrees of freedom is:

$df = (1/2)\ \{p\ (p + 1)\} - q$ ---------- (31)

Where:

P is the number of measured variables, (1/2) {p (p + 1) is the number of equations or distinct elements in the input matrix $\sum$,

Q is the number of free unknown parameters to be estimated minus the number of implied variances.

Acknowledging the complexity of model identification and its significant impact on parameter estimates, SEM researchers and authors identify and describe three possible identification levels respectively as under-identification, just-identification and over-identification (Schumacker & Lomax, 2010; Shah & Goldstein, 2006). A model is under-identified when the number of free parameters to be estimated in a model is greater that the number of equations in the model. Such a model has more than one set of parameter estimates that could generate the observed data, implying that a researcher has no way of choosing among the various solutions because each solution can be valid or invalid. Furthermore, such a model has negative degrees of freedom. According to Shah and Goldstein (2006), an unidentified model may not converge during estimation, and when they do, the parameter estimates are not reliable and overall fit may not be appropriate for statistical interpretation.

On the other hand, a just-identified model has exactly the same number of equations as that of the number of equations to be estimated. Such models provide an exact solution for parameters and there is no extra information to uniquely estimate the parameters. Just-identified models have zero degrees of freedom.

Lastly, in an over-identified model, the number of equations are more than the number of parameters to be estimated. Such a model has fewer unknowns than equations. Over-identified models have positive degrees of freedom and have extra information or equations that are used to estimate some of the parameters, thus enhancing the reliability of the estimates (Shah & Goldstein, 2006). Moreover, Holbert and Stephenson (2002) reckon that all SEM models must be over-identified.

From the above information, the degrees of freedom of the model of this research can be calculated using formula 33 shown above as follows:

$df = (1/2)\{p(p+1)\} - q$

$= 107$

The proposed model has enough degrees of freedom (*i.e.* 107) to be identified successfully.

Alternatively, one way suggested by Diamantopoulos and Siguaw (2000) for checking if a model meets a minimum requirement for identification is by calculating t using the formula:

$t \leq s/2$, …………………………………………………………………………………… (32)

Where: t = the number of parameters to be estimated,

s = (p + q) (p + q + 1); the number of variances and covariances amongst the manifest (observable) variables.

p = the number of y-variables

q = the number of x-variables.

S or the number of variables to be estimated in the model of the study is 20 indicators, plus their errors, plus 10 estimates in the structural model plus four error variances for each of the four endogenous variables, plus one correlation parameter (*phi*) between the two endogenous variables, minus six fixed estimations for each latent variable. The value of t would then be 49.

Reisinger and Turner (1999) point at a number of symptoms of identification problems. These are;

- Very large standard errors for coefficients;
- The inability of the programme to invert the information matrix;
- Impossible estimates, for example with negative and non-significant error variances for any constructs; and/or
- High correlations exceeding .80 among observed variables.

Minimum and necessary, yet not sufficient conditions to be met for a model to be identified have been pinpointed. According to Schumacker and Lomax (2010), the order condition requires that the number of free parameters to be estimated should be less than or equal to the number of distinct values in the matrix S. Reisinger and Turner (1999) identifies the following requirements for model identification:

- A large number of coefficients relative to the number of correlations or covariances, indicated by a small number of degrees of freedom – similar to the problems of identification and/or insufficient sample size;
- The use of reciprocal effects in the form of two-way causal arrows/relationships between the constructs;
- Failure to fix the scale of a construct, and incorrect assignment of parameters as fixed or free;
- Skewness, nonlinearity, heteroscedasticity, multicollinearity, singularity, and/or autocorrelation.

Strategies for model identification have also been suggested in literature. For example, Reisinger and Turner (1999) suggested potential solutions to the problem of identification as follows;

- Eliminate some of the estimated coefficients by deleting paths from the diagram;
- Resolve multi-collinearity by using data reduction methods like Principal Components Analysis;
- Eliminate troublesome variables, e.g. highly correlated variables and/or redundant variables;
- Check univariate descriptive statistics for accuracy, e.g. out-of-range values, plausible standard deviations, and/or coefficients of variation;
- Check for missing values;
- Identify non-normal variables by checking for skewness and kurtosis;
- Check for outliners;
- Check for nonlinearity and heteroscedasticity; and/or
- Reformulate the theoretical model to provide more constructs relative to the number of relationships examined.

Lastly, according to Diamantopoulos and Siguaw (2000) most SEM programmes, including LISREL, have a capacity to deal with the problem of model identification. Before reviewing the next step of SEM referred to as model estimation, a called item parcelling is explicated first.

3.8.4.5.1 Item Parceling

Lengthy measures/scales with too many items can present researchers with challenges when testing models with structural equation modelling. According to Yang, Nay and Hoyle (2010), estimating with measures that have too many items could result in reduced power because too many parameters have to be estimated; relatively large samples would be needed and the fit of the data could be compromised because individual items may have poor psychometric properties, leading to the rejection of plausible models. Little *et al*. (2002) further reckon that lengthy scales may be associated with subsets of items that share specific sources of variance that may result in unwanted contamination and misspecification. One strategy for dealing with the problem of lengthy scale is item parcelling, or the creation of item parcels.

Item parcelling is the technique of creating two or more aggregate or average variables, called item parcels, from a number of items as indicators of latent constructs (Bandalos, 2002; Matsunaga, 2008). In order to conduct further and informative SEM steps like model estimation, it may be necessary to conduct item parcelling so that the model can converge or run (Shanmugam & Marsh, 2017). According to Hall, Snell and Houst (1999), some of the advantages of item parceling include rectifying sample size, reducing model estimation problems associated with sample size requirements pertaining to the fact that a larger number of indicators per latent construct requires more free parameters for a model and item parcels tend to be more reliable and normally distributed, and to have values that are more continuously distributed. Hagtvet and Nasser (2002) reckon that item parcels may circumvent problems associated with the difficult factors, provide a useful approximation to continuous scales, provide more stable results than often obtained with item-based analyses, and create indicators with greater reliability and more definitive rotational results and are more reliable than single item measures.

Regarding the number of item parcels per construct, at the extreme is the practice of creating one item parcel per construct, referred to as the composite factor, (Matsunaga, 2008) and is the least rigorous technique, especially for SEM studies. Although some researchers recommend creating and utilising three or more item parcels for every one latent construct (Hall, Snell & Foust, 1999; Hagtvet & Nasser, 2002; Marsh, Hau, Balla & Grayson, 1998), creating two item parcels is a very common practice. The technique of creating an aggregate or an average of items on the basis of odd/even split to form two item parcels for each construct/variable when dealing with unidimensional constructs is widely acknowledged and practiced (e.g. Bandalos, 2002). Creating and utilising two parcels per construct/variable in empirical research is also widely practiced (Bridgeman & Rock, 1993; Espelage, Mazzeo, Aggen, Quittner, Sherman & Thompson, 2003; Tolman, Impett, Tracy & Michael, 2010). In fact, according to Little et *al.* (1999) a shortened scale through the use of item parcels is merely a smaller sample of all possible indicators and one need not be overly concerned that the shortened scale may not be commensurate with the large scale in its content validity, because neither is a perfect measure. Nasser-Abu Alhija and Wisenbaker (2006) found that including more than two item parcels per construct did not affect standard errors of estimated factor structure. In this present study, two or more item parcels per construct will be constructed on the basis of the number of items derived from dimensionality analysis; or alternatively, an odd-even split strategy would be utilised if the construct is proven to be unidimensional.

3.8.4.6 Model Estimation

Schreiber (2008) describes parameter estimation as the procedure that is used to derive parameter coefficients, standard errors and the significance levels of the estimations/coefficients - these indices give information on the relationships or interlinkages between variables. According to Levine, Petrides, Davis, Jackson and Howell (2005), parameter estimation of the free or unknown parameters from the data proceeds model identification. In parameter estimation, the SEM software programme estimates and compares the population matrix, *i.e.* $\sum$, and the sample matrix, *i.e.* S. Parameter estimation seeks to minimise the discrepancy or difference between estimated and the observed covariance (Quintana & Maxwell, 1999).

According to Diamantopoulos and Siguaw (2000) the purpose of parameter estimation is to generate numerical values for the free and constrained parameters in a model. Schumacker & Lomax (2010) define model estimation as a procedure of obtaining estimates for each of the parameters or equations specified in the model that produce the implied matrix $\sum$, the variance-covariance matrix of the implied population, such that the parameter values yield a matrix as close as possible to S, the sample variance-covariance matrix of the observed variable.

LISREL programme has seven parameter estimation methods/techniques (Reisinger & Turner, 1999) that can be grouped into two main categories, namely, non-iterative, limited information methods, and iterative, full-information methods (Diamantopoulos & Siguaw, 2000). Limited information techniques are fast and estimate each parameter separately without using information from other equations in the model. Examples of limited information estimation techniques are Instrumental Variables (IV) and Two-Stage Least Squares (TSLS). They are commonly used to compute starting or initial values for the full estimation methods. Full estimation techniques are iterative, that is, obtain final estimates through rigorous numerical search which minimises the value of the fitting function by successively improving the estimates, and they estimate the entire system of equations simultaneously.

Holbert and Stephenson (2002) reckon that full-information techniques are recommended to acquire an optimal solution for a specified structural model. Furthermore, research has shown that ML is the commonly used parameter estimation technique, used by as much as over 65% of SEM researchers (Guo, Perron & Gillepsie, 2008; Shah & Goldstein, 2006). The next SEM step that follows parameter estimation is testing model fit.

3.8.4.7 Model Testing

Model testing can be defined as the process of determining how well data fit the model (Schumacker & Lomax, 2010). Model testing is the process of determining the extent to which the theoretical model is supported by the observed data. This step entails testing the plausibility or robustness of the derived model on the basis of the available data.

Reisinger and Turner (1999) describe three types of model fit testing, namely, absolute fit measures, incremental fit measures and parsimonious fit measures. Absolute fit measures assess the overall fit of a model, focusing both on the structural and the measurement parts of the model. Schumacker and Lomax (2010) refer to these overall measures as global model tests. Diamantopoulos and Siguaw (2000) reckon that the purpose of assessing a model's overall fit is to determine the degree to which the model as a whole is consistent with the empirical data at hand. Overall fit measures summarise the model's overall fit. The measures used to assess overall model fit are Chi-Square statistic (χ^2), Goodness of Fit Index (GFI), Root-Mean-Square Residuals (RMSR), Root Mean Square Error of Approximation (RMSEA), Non-Centrality Parameter (NCP), Scaled Non-Centrality Parameter (SNCP) and Expected Cross-Validation Index (ECVI). Each of these overall fit measures has different acceptable threshold levels. Some of these indices together with limited descriptions are presented in Table 3.3.

Chi-square is regarded as a traditional measure for evaluating overall model fit of covariance structure models (Hooper *et al*. (2008) that provide a test of overall fit. Diamantopoulos and Siguaw (2000) outlines some assumptions that are important in interpreting chi-square. These are:

- A statistically significant Chi-square causes rejection of the null hypothesis, implying an imperfect model fit and possible rejection of the null hypothesis.
- Chi-square is sensitive to departures from multivariate normality and sample size and assumes that the model fits perfectly in the population.
- Chi-square is regarded as a measure of badness-of-fit since large χ^2 values imply a bad fit while small χ^2 values imply a good fit.
- The degrees of freedom serve as a standard by which to judge whether χ^2 is large or small.

Table 3.4

Fit indices and their acceptable thresholds according to four widely referenced publications

	Diamantopoulos & Siguaw (2000)	Schumacker & Lomax (2010)	Hooper *et al.* (2008)	Hair *at al*. (2010)
Acceptable threshold levels				
Fit indices				
Absolute Fit indices				
RMSEA	< .80	<.05	<.07	<.09
SRMR	< .05	<.05	<.08	<.04
GFI	> .90	> .09	>.95	>.90
Incremental Fit Indices				
NFI	> .90	> .09	>.95	>.90
NNFI	> .90	> .09	>.95	>.90
CFI	> .90	> .09	>.95	>.90
IFI	> .90	> .09-	>.95	>.90
RFI	> .90	> .09	>.95	>.90

Note: RMSEA = Root Mean Square Error of Approximation; SRMR = *Standardised Root Mean Square Residual*; GFI= *Goodness-of-fit Index;* NFI = *Normed Fit Index*; NNFI = Non- *Normed Fit Index*; CFI = *Comparative Fit Index*; IFI = *Incremental Fit Index*; RFI = *Relative Fit Index.*

Diamantopoulos and Siguaw (2000) reckon that for practical purposes regarding overall model testing it should suffice to use the results of the Chi-square test in conjunction with the RMSEA, ECVI, SRMR, GFI and CFI indices to reach an informed decision concerning the model's overall fit. Relying on a single index is likely to lead to untrustworthy model fit interpretation.

Incremental fit indices match the proposed model to a comparison model, or the null model, described as the simplest model that can be theoretically justified (Reisinger & Turner, 1999). Incremental fit indices are also referred to as relative fit measures because they show how much better the model fits compared to a baseline model (Diamantopoulos & Siguaw, 2000). Examples of incremental fit indices are Normed-Fit Index (NFI), the Non-Normed Fit Index (NNFI) and the Comparative Fit Index (CFI) (Diamantopoulos & Siguaw, 2000). Ranging

between 0 and 1, the greater these incremental indices are, the more acceptable they are. The suggested acceptable threshold values of incremental fit indices range from ≥ .90 (Diamantopoulos & Siguaw, 2000; Hair *at al*. 2010; Schumacker & Lomax, 2010) to ≥ .95 (Hooper *et al*. 2008), as indicated in Table 3.4. In this current research, .90 will be used as a cut-off index.

Parsimonious goodness-of-fit indices take into account and adjust in terms of model complexity by considering the number of parameters, including the degrees of freedom required to achieve a given value of Chi-square (Diamantopoulos & Siguaw, 2000; Schumacker & Lomax, 2010). Examples of parsimonious fit measures are the Parsimony NFI (PNFI), Parsimony GFI (PGFI), and Parsimony CFI (PCFI). LISREL programme output gives the fit indices of all the above-mentioned overall, incremental and parsimonious measures, plus the Critical N statistic (CN), which shows the size that a sample must reach in order to accept the fit of a given model on a statistical basis (Diamantopoulos & Siguaw, 2000). Although Table 3.4 gives various criteria from different authors, in this study the Diamantopoulos and Siguaw (2000) criteria of .90 for assessing fit indices will be used.

Because SEM involves dealing with two sub-models, *i.e.* the structural sub-model and the measurement sub-model, there is a need to address how these different sub-models are handled in terms of their fit. These models are explained in this section.

3.8.4.8 Measurement model

The main purpose of testing the fit of the measurement model is to assess the reliabilities and the validities of the indicators of the latent variables or constructs (Diamantopoulos & Siguaw, 2000). Assessing model fit of the measurement model is associated with determining whether the indicators of the unobserved constructs actually do measure those constructs (validity) as well as the extent to which the indicators are consistent in measuring those constructs (that is the reliability of the indicators). Reisinger and Turner (1999) describe two ways this can be done, *i.e.* through assessing the Squared Multiple Correlation Coefficients (SMC) and assessing the Total Coefficients of Determination (TCD).

First, SMCs for both the x-indicators and the y-indicators indicate the extent to which those indicators actually measure the latent constructs they are supposed to be measuring, the variance accounted for by the constructs, as well as the extent to which the variables are free from measurement error. Ranging between 0 and 1, the higher the SMC coefficient, the better. According to Reisinger and Turner (1999), SMC coefficients represent the consistency with which the indicators measure the construct they purport to be measuring. According to Diamantopoulos and Siguaw (2000), SEM allows for calculating a composite reliability value, or construct reliability latent variable/construct using the formula:

$$\rho_c = (\Sigma\lambda)^2 / [(\Sigma\lambda)^2 + \Sigma(\theta)] \quad (33)$$

Where:

ρ_c = composite reliability;

λ = indicator loadings;

θ = indicator error variances (*i.e.* variances of the δ's and ε's);

Σ = summation of the indicators of the latent variable.

Second, Total Coefficient of Determination (R^2), also referred to as TCD (R^2), for both x- and y- variables are computed to indicate the extent to which the indicators/measurement variables measure their relevant constructs as groups. TCD (R^2) coefficients also range between 0 and 1; the closer they are to 1, the better they measure the construct as a group. Furthermore, Diamantopoulos and Siguaw (2000) refer to a complementary measure of composite reliability, that is, the average variance extracted (P_v) which indicates the degree of variance captured by the construct in relation to the degree of variance due to measurement error. P_v values less than .50 indicate that the measurement error accounts for a greater degree of variance and casts doubts on the reliability of the indicators measuring the construct. The formula below is used to measure $P_{v.:}$

$$P_v = (\Sigma\lambda)^2 / [\Sigma\lambda^2 + \Sigma(\theta)] \quad (34)$$

3.8.4.9 Structural model.

According to Diamantopoulos and Siguaw (2000), the major purpose of testing the fit of the structural model is to determine if the data supports the paths or causal relationships between the endogenous and the exogenous variables as hypothesised by the researcher. In fact, this part of the study model tests the extent to which the hypotheses of the study are either supported or rejected. The two indices as described above, used in testing the measurement model, are also useful in assessing the structural sub-model. SMC coefficients in structural model assessment are used to establish the variance in each endogenous variable that is attributed to the latent independent variables in the structural model, while TCD (R^2) coefficients are used to establish the strength of the relationships for all the structural equations together (Reisinger & Turner, 1999).

Reisinger and Turner (1999) describe two different indices that are used for evaluating the fit of the structural model. First, the indicator's estimates should be examined for their significance as indicated by their t-values. Coa and Zhang (2013) recommend that when using 1-tailed test, t-values greater than |1.65| are significant at .05. This guideline will be used in this current study. Second, the standard errors for each construct, showing the accuracy of the estimated values, are inspected; the smaller the standard errors, the better is the estimation.

Further analysis of the individual paths should also be considered in SEM, for example inspection of the fitted residuals. Fitted residuals (FR) represent the differences between the observed and the fitted correlations from the model. They could be used to examine the fit of the model. Relatively small residuals compared to the size of the elements of the correlation matrices providing an acceptable fit (Reisinger & Turner, 1999). The technical problems associated with the fitted residuals are avoided by determining the standardised residuals, calculated by dividing the FR by their standard errors. They also require inspection. Lastly, Reisinger and Turner (1999) reckon that the Q-plot is another way of providing the best picture of model fit whereby the standardised residuals are plotted on the horizontal axis against the quartiles of the normal distribution on the vertical axis. According to Reisinger and Turner (1999), best fit on the Q-plot is obtained when all residuals lie in a straight line, and worst fit

is obtained when they lie on a horizontal axis, while a non-linear pattern indicates non-normality, non-linearity and/or specification errors in the model.

3.8.4.10 Power assessment

Diamantopoulos and Siguaw (2000, p. 93) define the power of a test as the probability that an incorrect model will be rejected; with four possible different scenarios/consequences that could then be described, based on the size of the sample and the possibility of the presence/absence of specification errors in a model. First, the probability of making a correct decision is evident when the test statistic, usually the Chi-square, is significant, indicating that the model should be rejected because the power of the test is also low. Under these circumstances, the researcher has more confidence that a correct decision of rejecting the model has been made. Second, the probability of making a correct decision arises when the power of the test is high and the outcome of a test, oftentimes a Chi-square, is not significant, indicating that the model fit should be accepted. The correctness of these two decisions are made with confidence.

On the other hand, Diamantopoulos and Siguaw (1999) reckon that two incorrect decisions might also be made on the basis of power of a test and the possibility of the absence or presence of specification errors. Type I error happens when a correct model is rejected because of a small sample, low test power and the possibility of specification errors. Type II error happens when an incorrect model is accepted in the presence of high power and the possibility of gross misspecification that is not easily detected because of high power of the test.

Diamantopoulos and Siguaw (2000) suggest four ways of assessing the power of a test. First, the power of a test can be estimated with a test of exact fit by inspecting the perfect fit of a null hypothesis. Because this strategy is restrictive, the second option is to test for the power associated with the close fit of the null hypothesis. In both cases, the RMSEA statistics is used. Third, SAS programme could be utilised to calculate the power of a test. Fourth, without the SAS programme, the tables that were developed by MacCallum, Browne and Sugawara (1996) could be used to calculate and estimate the power of a test. Lastly, LISREL VIII, the eighth

edition, has the capability of calculating the power of a test through its LISPOWER function (Schumacker & Lomax, 2010).

3.8.4.11 Model Modification

Hooper *et al*. (1998) maintain that given the complexity of structural equation modelling, it is uncommon to find that the fit of a proposed model is poor. A poor fitting model should be modified to improve the fit. Diamantopoulos and Siguaw (2000) reckon that, though not common, one may modify a well-fitting model to further improve it. Model modification may be described as a procedure of re-specifying a model (Guo *et al*. (2008) by deleting parameters that are not significant and/or adding parameters that improve the fit of a model (Hox & Bechger, 1998) but caution should be taken to test the modified model with new data (Diamantopoulos & Siguaw, 2000). Model modification proceed model testing, with the primary purpose of improving model fit.

Hox and Bechger (1998) argue that in order to avoid the danger of capitalising on chance properties of the sample during model modification, it should help to only apply modification when there is theoretical justification for changes on one's model. Model modification should be supported by theory; meaningless additions and deletions that are not supported by theory should be avoided. Also, it is important to note that in modifying a model, the analysis becomes exploratory, as opposed to confirmatory in nature (Reisinger & Turner, 1999). A new model derived through re-specification is tentative and could need to be cross-validated by a new sample (Schumacker & Lomax, 2010).

Diamantopoulos and Siguaw (2004) describe two procedures for model modification, *i.e.* specification search and diagnostics for model modification. Specification search is a procedure of identifying and correcting internal specification errors. LISREL programme output provides ways of assisting a researcher in where to start with specification search, and can give guidance regarding where to look for specification errors through standardised, fitted residuals as well as modification indices. Residuals greater than 2.58 are considered significant at .05, indicating substantial error for a pair of indicators (Diamantopoulos & Siguaw, 2000).

On the other hand, modification indices show a minimum decrease in the model's Chi-square value if a previously fixed parameter is set free and the model re-specified and re-estimated (Diamantopoulos & Siguaw, 2000). A cut-off value for a modification index is 6.64 and modification indices higher than this value are considered large (McMahon, Hoertel, Wall, Okuda, Limosin, & Blanco, 2015; Muthen & Muthen, 2010). Nonetheless, researchers should not just delete, add, free previously fixed and/or fix previously freed paths simply on the basis of this cut-off value at a first go, but any model modifications should be supported by theory.

3.8.4.12 Confirmatory factor analysis

A form of SEM modelling that is unlike exploratory factor analysis (EFA) which is used to explore the underlying structure of measures or constructs (Suhr & Shah, 1999), confirmatory factor analysis (CFA) have the primary purpose of confirming a structure of a measure/instrument *a prior* (Anderson & Gerbing, 1988; Pallant, 2016). CFA is an SEM technique that is confirmatory of theory (Schreiber, Nora, Stage, Barlow & King, 2006) and could be defined as a rigorous SEM methodological approach utilised for testing the underlying structure or factorial validity of measuring instruments that were postulated by researchers *a prior* (Byrne, 1998). As such, CFA is theory-and/or hypothesis-driven because the analysis is confirming established relationships amongst latent variables, the measure, and the observed variables (Albright & Park, 2009). Therefore, in using CFA, the primary approach is studying the covariation among the observed variables to determine the plausibility of the factor structure (Byrne, 1989).

Also, in CFA as a form of SEM the full spectrum of fit statistics/goodness-of-fit indices is used to examine the extent to which the model achieves fit. The RMSEA value is inspected against a cut-off significance value of .05 which indicates a reasonable fit (Diamantopoulos & Siguaw, 2000). Also, the upper bound of the 90 percent confidence interval for RMSEA is inspected against the critical cut-off value of .08 that confirms an acceptable model fit. LISREL 8.80 also explicitly tests the null hypothesis of close fit (H_{02}: RMSEA $\leq$ .05) and the 5% significance level of rejecting the fit. Furthermore, RMR and the standardised RMR values are part of the LISREL output that are interpreted against the criterion of < .08 (Schreiber *et al*. 2006) while values below .05 are indicative of good fit (Diamantopoulos & Siguaw, 2000).

Although Gliem and Gliem (2003) as well as Hooper *et al*. (2008) suggest cut-off values of .95 for the incremental fit indices of NNFI, CFI, IFI and also for NFI, RFI and GFI, Diamantopoulos & Siguaw (2000) and Hair *et al*., (2010) recommend lower cut-off values of .90 for acceptability of these fit indices and the latter recommendation will be used for this current study.

The unstandardised Lambda-X matrix is an output that displays factor loading estimates for the model (first-order) and is guided by the criterion of .30 (Diamantopoulos & Siguaw, 2000). Factor loadings < .30 are regarded as insufficient while factor loadings > .30 are regarded as sufficient. The significance of factor loadings on latent variables using t-values is based on one-tailed tests where t-values > 1.65 are considered significant at $p < .05$ (Anuwichanont, & Mechinda, 2011; Parasuraman, Zeithaml, & Malhotra, 2005). Although the Unstandardised Lambda-X matrix indicates that the factor loadings are significant, Diamantopoulos and Siguaw (2000) warn against absolute reliance on the unstandardised loadings and their associated t-values. The problem is that it may be difficult to compare the validity of different indicators measuring a particular construct. This is due to the fact that indicators of the same construct may be measured on very different scales, hence direct comparisons of the magnitudes of the loadings are inappropriate. Furthermore, since each latent variable has to be assigned a scale by fixing the loadings of one of its indicators to a unit, the loadings of the other indicators for that latent variable are only interpretable relative to the unit of the reference indicator. If a different indicator is used as the reference variable, the magnitudes of the loadings will change. Hence, the magnitudes of the standardised loadings should also be inspected (Diamantopoulos & Siguaw, 2000).

According to Diamantopoulos and Siguaw (2000), the values of the completely standardised solution loading matrix represent the slopes of the regression of the standardised items on the standardised latent construct dimensions that the item was designed to represent. Therefore, the completely standardised loadings indicate the average change expressed in standard deviations in the item associated with one standard deviation change in the latent variable. In addition, the correlations between the latent construct dimensions are also inspected. These correlations should be corrected for the attenuating effect of random and systematic

measurement error. The correlations should fall within reasonable limits, as high values (above .90) may indicate multi-collinearity (Weston & Gore, 2006).

In this study, CFA will be used to confirm the factorial structure of a multidimensional measure which is the CVSCALE by assessing the factor loadings of the items on the appropriate factors, the overall fit by assessing the different fit indices and by examining the inter-correlations between latent CVSCALE dimensions.

3.8.4.13 Fitting of the overall LISREL model

SEM uses various types of models, like regression, path and confirmatory models, to depict and represent the relationships among observed variables with the aim of quantitatively testing the plausibility of the hypothesised theoretical models (Schumacker & Lomax, 2010). In this study, as illustrated in Figure 3.1, it is hypothesised that the variables used to measure the latent unobserved constructs, *i.e.* cultural dimensions at individual level, the two work-related attitudes variables of job satisfaction and organisational commitment, the two organisational variables of organisational support and supervisory support and turnover intentions, are indeed reliably and validly measured by the associated variable. Moreover, the extent to which the two perceptual constructs and the two affective constructs mediate the relationship between cultural value dimensions and turnover intentions was hypothesised and will be tested by means of SEM.

3.8.5 Interpreting the structural model parameter estimates

As alluded to earlier, the structural model depicts the linkages or hypothesised relationships between the latent variables represented as exogenous and endogenous variables (Weston & Gore, 2006). The purpose of evaluating this part of the model is to substantiate or reject the relationships on the basis of the available data. Diamantopoulos and Siguaw (2000) emphasise four pivotal issues that should be inspected when interpreting the structural model. First, the signs of the hypothesised relationships should be inspected in terms of the extent to which they make sense in terms of the causal relationships and their consistence with the theory. Second, the parameter estimates should be inspected in terms of their significance ($p < .05$ or $p < .01$) as indicated by the t-values. The significance of path parameter estimates using t-values is based on one-tailed tests where t-values > 1.65 are considered significant at $p < .05$

(Anuwichanont, & Mechinda; Blome, Paulraj & Schuetz, 2011; Chen, Chen & Wu, 2016; Coa and Zhang, 2013; Kim, Kumar & Kumar, 2012; Parasuraman, *et al.*, 2005; Story, Boso & Cadogan, 2014; Tabachnick & Fidell, 2007). This guideline will be used in this current study to test the significance of hypotheses among study variables. Third, the magnitudes of the standardised parameter estimates are inspected in terms of their strengths, indicating the strength of the hypothesised relationships. Lastly, the squared multiple correlations (SMC) (R^2), which indicate the amount of variance in each endogenous variable explained by the latent variables linked to it in the structural model are inspected. The purpose of evaluating the structural model is to ascertain whether the hypothesised relationships specific in the conceptualisation phase are indeed substantiated by the data, or not. At this stage, the focus is on the paths between the various latent variables. Further analysis and inspection of the structural model involves an in-depth analysis of the freed elements of the gamma (Γ) and the Beta (B) matrices.

3.8.5.1 The gamma matrix

The Unstandardised matrix is used to assess the significance of the estimated path coefficients γij, expressing the strength of the influence of ξj (exogenous latent variables) on ηi (endogenous latent variables). The parameters are significant if the conditional probability associated with the sample parameter estimates under the stated null hypothesis is sufficiently small (*i.e.*, if t > |1.65|) (Cao & Zhang, 2013). Put the other way, a t-statistic greater than 1.96 is needed for significance at $p < .05$ and 2.56 for significance at $p < .01$ for two-tailed tests, but if the direction of the effect has been hypothesized *a priori*, a one-tailed test can be employed, where $t > 1.65$, $p < .05$, one-tailed would be sufficient (Tabachnick & Fidell, 2007). A significant γ estimate implies that the corresponding null hypothesis is rejected in favour of the alternative hypothesis, provided the sign associated with the γ estimate corresponds to the effect hypothesised under the alternative hypothesis. Rejection of the path-specific null hypothesis in turn implies support for the path specific substantive hypothesis. The strength of the statistically significant ($p < .05$) γ estimates was determined by examining the completely standardised matrix.

3.8.5.2 The beta matrix

The unstandardised B matrix is used to assess the significance of the estimated path coefficients βij, expressing the strength of the influence of ηj on ηi. The unstandardised βij estimates are also significant if the conditional probability associated with the sample parameter estimates under the stated null hypothesis is sufficiently small (*i.e.*, if $p < .05$) (Diamantopoulos & Siguaw, 2000). The significance of path parameter estimates using t-values will also be based on one-tailed tests where t-values > 1.65 are considered significant at $p < .05$ (Anuwichanont & Mechinda, 2011; Blome, *et al*., 2014; Chen, *et al*., 2016; Coa and Zhang, 2013; Parasuraman, *et al.* 2005; Tabachnick & Fidell, 2007)). A significant β estimate implies that the corresponding null hypothesis is rejected in favour of the alternative hypothesis, provided the sign of the β estimate corresponds to the effect hypothesised under the alternative hypothesis. Rejection of the path-specific null hypothesis in turn implies that the path-specific substantive hypothesis is corroborated. The strength of the statistically significant ($p < .05$) estimates was determined by examining the completely standardised β matrix.

3.8.5.3 Interpreting the modification Indices

It is also necessary to inspect the modification indices and completely standardized expected change values (Diamantopoulos & Siguaw, 2000) calculated for the gamma and beta matrices in order to determine whether any meaningful possibilities exist to improve the fit of the comprehensive model through additional paths. Modification of the model should, however, only be considered if the proposed structural changes could be theoretically substantiated (Diamantopoulos & Siguaw, 2000).

3.9 REGRESSION ANALYSIS AND TESTING FOR MEDIATION

Regression analysis is a family of techniques used to explore the relationships between two or more variables, usually continuous in nature (Pallant, 2016). Like SEM, regression analysis also needs the background of theory to identify the variables, *i.e.* independent variables that effectively "predict" dependent variables. Pallant (2016) reckons that regression analysis can be used to address a number of research questions. First, this analysis could be used to tell how well a set of variables predict a particular outcome. Second, regression could be used to statistically control an additional variable when exploring the predictive ability of a model.

Literature describes a number of types of regression analysis, namely standard multiple regression, hierarchical multiple regression and stepwise multiple regression (Babbie, 2007; Pallant, 2016). Standard multiple regression is applied when a number of predictor variables are entered into the equation simultaneously and the predictive power of each variable compared to others is assessed. Hierarchical multiple regression is applied when the predictor variables are entered into the model in a sequence of the researcher-based theory behind that sequence. Lastly, stepwise regression is applied when the researcher uses statistical analysis to select the variables that will go into the final analysis. For the purposes of this research, simple linear multiple regression and hierarchical regression will be used to assess the effect of one variable on another and the mediation effect of one variable on the relationship between an independent and a dependent variable (where LISREL could not perform this analysis), respectively.

3.9.1 Baron and Kenny's linear regression model for testing for mediation

Linear Regression analysis models could be used for testing for both moderation and mediation but the former is not of interest in this current study. Although this present research focuses on mediation, nonetheless it is worth it to differentiate between mediation and moderation. In moderation, the moderator variable intervenes by influencing the magnitude of variance in the relationship between the predictor and the outcome variables whereas in mediation, the mediator variable intervenes by explaining why and how the relationship between the predictor and the outcome variables occur (Baron & Kenny, 1986; Conchie & Donald, 2009; Fairchild & McKinnon, 2009). A four-step technique developed by Baron and Kenny's (1986) using a series of linear regression analysis models could be used to assess the mediating effect of a variable on the relationship between independent and dependent variables. To do this the following four steps need to be followed:

- Testing for the significance of the direct effect of the independent variable on the dependent variable; the results should indicate that the relationship between the two variables is significant.
- Testing for the significance of the direct effect of independent variable on the mediator variable; the results should indicate that the relationship between the two variables is also significant.

- Testing for the significance of the direct effect of mediator variable on dependent variable; the results should indicate that the relationship between the two variables is significant.
- Testing the effect of both the independent variable, and the mediating variable, in a single regression model on the dependent variable. The expectation is that the mediator will be a stronger predictor of the dependent variable than the independent variable to confirm mediation (Baron & Kenny, 1986: Conchie & Donald, 2009). If the results indicate that the effect of the independent variable is reduced to non-significance and is lower than that of the mediator variable, mediation effect of the mediator variable is confirmed (Baron & Kenny, 1996; Conchie & Donald, 2009).

The extent to which the independent variable is related to the dependent variable determines the levels of mediation and suggests the following conditions (Baron & Kenny, 1986). Partial mediation is evident if both the independent and the mediator variables in the fourth equation have a significant influence on the dependent variable, but the effect of the independent variable is less than that of the mediator variable. Full mediation is evident when the effect of the independent variable diminishes to non-significance and the effect of the mediator variables is maintained when both the independent and the mediator variables are regressed against the dependent variable. This approach was used to test for mediation effects, where the factor that could not be included in the structural equation modelling was involved.

3.10 SUMMARY

In the present chapter the turnover intention model to be tested was presented. The substantial and the statistical hypotheses were presented. The research methodology, inclusive of the methodology, the sample, sampling, research participants, data collection procedure, ethical considerations, measuring instruments as well as the statistical methods used to test the model were outlined. The different ways of dealing with method bias and measurement errors arising from failure to address latent variable interactions in SEM as well as strategies for addressing discriminant validity were also highlighted.

CHAPTER FOUR

RESEARCH RESULTS

4.1. INTRODUCTION

This chapter presents the results from data analysis described in Chapter 3. The theoretical model depicted in Figure 3.1 and derived from an in-depth study of the available literature resulted in the formulation and specification of hypotheses that need to be tested. The structural model (Figure 3.1) hypothesised relationships between specific latent variables and the nature of the relationships among these variables and how they influence *Turnover intention.* Item parcels derived from random parcelling of uni-dimensional scales and subscales (in the case of Hofstede's cultural dimensions) were calculated in SPSS version 23 (2015). These item parcels were used to operationalise the measurement and structural models so as to test the hypothesised relationships. The operationalisation of the measurement and structural models assume that the items in each item parcel reflect only the underlying dimension that it intends to measure. From these defined structural and measurement relationships, the statistical hypotheses were formulated. Two overarching statistical hypotheses were formulated on overall measurement and structural model fit, and 26 statistical hypotheses on the specific structural relations hypothesised in the structural model were formulated. Results of the statistical analysis aimed at testing these stated null hypotheses are presented in this chapter. The chapter commences with a discussion of the treatment of the missing values, which is followed by discussions of the results of item and dimensional analyses, the test of multivariate normality for the measurement model, the evaluation of the measurement and structural models, and the hypothesised relationships among the latent variables.

4.2. MISSING VALUES

Byrne (2001) maintains that the pervasive problem of missing scores in structural equation modelling (SEM) is increasingly recognised as a critical issue because of its potential to introduce bias in modelling analysis and conclusions. The missing values problem is more prevalent in social scientific studies where self-reports are utilised to collect data either introduced deliberately, as respondents avoid certain items or miss items unintentionally. The intention of addressing the problem of missing values is to include as many cases as possible, preferable all, in the analysis. In the present study, this problem of missing values was addressed through multiple imputation (MI) (Jöreskog & Sörbom, 2006). The multiple

imputation procedures available in LISREL 8.80 assume that the values are missing at random (MAR) and that the observed variables are continuous and follow a multivariate normal distribution (Du Toit & Du Toit, 2001). Furthermore, Mels (2010) suggests that multiple imputation may be used even when the conditional assumptions are not met. As long as the observed variables are measured on a scale comprising five or more scale values, the observed variables may not be excessively skewed (even though the null hypothesis of multivariate normality has been rejected) and less than 30% of the data constitute missing values. The latter assumptions were met in this study. Only 3.49% of the data constituted missing values. All the item responses were recorded on scales of 5 or more gradations. Inspection of the stem and leaf plots indicated that the data was not excessively skewed. Through this technique, missing values are substituted with values derived from averages via simulation (Jöreskog & Sörbom, 2006). The multiple imputation technique was preferred in order to retain as many data cases as possible since the current sample was not substantially above the minimum required sample size of 200 for most SEM analyses (Diamantopoulos & Siguaw, 2000). Multiple imputation was performed through a procedure available in LISREL 8.80 and all the 325 data cases were retained and used in the statistical analyses.

4.3. ITEM ANALYSIS

Item analysis using the SPSS Release 23, Reliability analysis (SPSS Inc., 2015) was performed on the items of the scales used to measure the latent variables under study. The purpose of conducting item analysis was to identify and eliminate items that are not contributing to internal consistency of the latent variables measured by these scales.

4.3.1 Item analysis of the Collectivism Cultural Dimension scale

A 26-item five-dimensional instrument called the Cultural Value Scale (CVSCALE) developed by Yoo, *et al*. (2011) was used to measure the cultural value dimensions of *Collectivism, Power distance, Uncertainty avoidance, Masculinity* and *Long-term orientation* at individual level. A Cronbach Alpha of $\alpha = .813$ was obtained for the *Collectivism* subscale which is regarded as good[2] (Gliem & Gliem, 2003; Pallant, 2016). The corrected item-total correlation values indicative of the extent to which each item correlates with the total score is demonstrated in the

[2] Guidelines for interpreting reliability: $\alpha > .90$, excellent; $\alpha > .80$, good; $\alpha > .70$, acceptable; $\alpha > .60$, questionable; $\alpha > .50$, poor; $\alpha < .50$, unacceptable.

Item-Total Statistics; values below .30 are regarded as low, indicating that the item could be measuring a different construct and the item may warrant deletion (Pallant, 2016). As indicated in Table 4.1, all the corrected item-total correlations were larger than .30, depicting that they were all measuring the same construct. None of the items would result in an increase in Alpha if deleted. The mean inter-item correlation is .42, with values ranging from .32 to .6. This suggests relatively low correlations depicting definite but small relationships, to moderate correlations, depicting substantial relationships amongst the items. All the items were therefore retained.

Table 4.1

The reliability analysis output for the Collectivism subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.813	.814	6

Inter-Item Correlation Matrix

	col1	col2	col3	col4	col5	col6
col1	1.000					
col2	.431	1.000				
col3	.356	.439	1.000			
col4	.340	.322	.603	1.000		
col5	.355	.337	.440	.494	1.000	
col6	.413	.415	.413	.406	.561	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
col1	2.14	37.099	.510	.278	.797
col2	19.55	36.940	.522	.310	.795

col3	19.86	36.636	.618	.449	.776
col4	19.84	35.777	.588	.436	.780
col5	2.40	34.777	.604	.413	.777
col6	2.53	33.818	.610	.406	.776

Item Statistics

	Mean	Std. Deviation	N
col1	3.93	1.616	325
col2	4.51	1.609	325
col3	4.21	1.465	325
col4	4.22	1.616	325
col5	3.66	1.696	325
col6	3.53	1.792	325

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum/ Minimum	Variance	N of Items
Item Means	4.010	3.529	4.514	.985	1.279	.139	6
Item Variances	2.675	2.146	3.213	1.067	1.497	.125	6
Inter-Item Correlations	.422	.322	.603	.281	1.874	.006	6

4.3.2 Item analysis of the Power Distance Cultural Value Subscale

As indicated in Table 4.2, an internal consistency reliability Cronbach Alpha coefficient of α = .763 was obtained for *Power Distance* subscale, which is considered acceptable (Gliem & Gliem, 2003; Pallant, 2016). All the corrected item-total correlation values are larger than .30, which is again considered acceptable (Pallant, 2016). The item-total statistics indicated that the Cronbach Alpha would increase slightly if item PD5 was deleted, to α = .784. It was decided that deletion of item PD5 was not warranted considering that the increase would only be marginal and the item had a satisfactory corrected item-total correlation of .37. The mean inter-item correlation of the *Power distance* scale is .406, with values ranging from .239 to .589, suggesting relatively low correlations, depicting definite but small relationships, to moderate correlations, depicting substantial relationships amongst the items of the *Power Distance* scale.

Table 4.2

The reliability analysis output for the Power Distance subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.763	.774	5

Inter-Item Correlation Matrix

	PD1	PD2	PD3	PD4	PD5
PD1	1.000				
PD2	.589	1.000			
PD3	.387	.533	1.000		
PD4	.432	.451	.520	1.000	
PD5	.279	.239	.315	.320	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
PD1	7.65	16.204	.562	.391	.719
PD2	7.40	14.623	.601	.464	.697
PD3	7.18	13.972	.600	.397	.695
PD4	7.12	13.643	.583	.357	.701
PD5	7.00	15.352	.370	.148	.784

Item Statistics

	Mean	Std. Deviation	N
PD1	1.44	1.006	325
PD2	1.69	1.227	325
PD3	1.91	1.338	325
PD4	1.97	1.419	325
PD5	2.09	1.469	325

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	1.817	1.437	2.086	.649	1.452	.066	5
Item Variances	1.697	1.012	2.159	1.147	2.133	.207	5
Inter-Item Correlations	.406	.239	.589	.350	2.461	.013	5

4.3.3 Item analysis of the Uncertainty Avoidance Cultural Value Dimension Scale

As presented in Table 4.3, an internal consistency reliability Cronbach Alpha coefficient of α = .779 was obtained for *Uncertainty Avoidance* subscale which is acceptable (Gliem & Gliem, 2003; Pallant, 2016). All the corrected item-total correlation values were larger than .30, which is considered acceptable (Pallant, 2016). The item-total statistics indicated that the Cronbach Alpha would increase moderately to α = .815 if item UA 1 was deleted, but it was not deleted due to its relatively stable Corrected item-total correlation of .459. The mean inter-item correlation is .463, with values ranging from .289 to .686, suggesting relatively small but definite to moderate relationships amongst the *Power distance* scale items.

Table 4.3

The reliability analysis output for the Uncertainty Avoidance subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.779	.812	5

Inter-Item Correlation Matrix					
	UA1	UA2	UA3	UA4	UA5
UA1	1.000				
UA2	.475	1.000			
UA3	.397	.627	1.000		

UA4	.289	.432	.527	1.000	
UA5	.304	.373	.523	.686	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
UA1	22.73	4.494	.459	.251	.815
UA2	22.53	5.299	.626	.465	.716
UA3	22.44	5.457	.669	.507	.710
UA4	22.47	5.657	.597	.519	.731
UA5	22.47	5.540	.577	.511	.733

Item Statistics

	Mean	Std. Deviation	N
UA1	5.43	1.097	325
UA2	5.63	.706	325
UA3	5.72	.632	325
UA4	5.69	.628	325
UA5	5.69	.676	325

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	5.632	5.431	5.720	.289	1.053	.014	5
Item Variances	.590	.394	1.203	.809	3.054	.119	5
Inter-Item Correlations	.463	.289	.686	.397	2.372	.016	5

4.3.4 Item analysis of the Masculinity Cultural Value Dimension Scale

As indicated in Table 4.4, an internal consistency reliability Cronbach Alpha coefficient of α = .744 was obtained for *Masculinity* subscale which is considered as acceptable (Gliem & Gliem, 2003; Pallant, 2016). All the corrected item-total correlation values were larger than .30, which is considered acceptable (Pallant, 2016). The item-total statistics indicated that the Cronbach Alpha would increase slightly to α = .762 if item MASC 4 was deleted. Deletion of the item was not warranted considering its stable corrected item-total correlation of .434 as

well as the marginality of the suggested increase. The mean inter-item correlation is .438, with values ranging from .306 to .600, suggesting small but definite to moderate relationships amongst the *Masculinity* items.

Table 4.4

The reliability analysis output for the Masculinity subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.744	.757	4

Inter-Item Correlation Matrix

	MASC1	MASC2	MASC3	MASC4
MASC1	1.000			
MASC2	.456	1.000		
MASC3	.505	.600	1.000	
MASC4	.306	.322	.441	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
MAS1	8.72	17.778	.523	.297	.704
MAS2	7.73	14.747	.574	.394	.665
MAS3	7.97	14.150	.676	.475	.606
MAS4	6.57	14.758	.434	.207	.762

Item Statistics

	Mean	Std. Deviation	N
MAS1	1.61	1.295	325
MAS2	2.60	1.703	325
MAS3	2.36	1.637	325
MAS4	3.76	1.964	325

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Max/ Min	Variance	N of Items
Item Means	2.582	1.612	3.760	2.148	2.332	.793	4
Item Variances	2.779	1.676	3.856	2.179	2.300	.800	4
Inter-Item Correlations	.438	.306	.600	.295	1.964	.011	4

4.3.5 Item analysis of the Revised Long-term Orientation Cultural Value Dimension Scale

When all the items of the *Long-term Orientation* subscale were included in the item analysis, a Cronbach Alpha of α = .691 was obtained, which is considered questionable by Gliem and Gliem (2003). Item LTO 5 had a corrected item-total correlation of r = .274, which is less than an acceptable threshold of .30 (Pallant, 2016). The item-total statistics indicated that the Cronbach Alpha would increase substantially to α = .713 if this item were deleted; the item was subsequently deleted. As illustrated in Table 4.5, after deletion, the revised internal consistency reliability Cronbach Alpha coefficient of α = .713 was obtained for *Long-term Orientation* subscale, which is regarded as acceptable (Gliem & Gliem, 2003; Pallant, 2016). After LTO 5 deletion, the item-total statistics indicated that the Cronbach Alpha would increase slightly to α = .761 if item LTO 2 were deleted; the item was not deleted due to its stable corrected item-total correlation of .359 and a slight increase associated with its deletion. The mean inter-item correlation is .386, with values ranging from .191 to .704 after the deletion of LTO5 (which had the lowest inter-item correlation of .111), suggesting slight, almost negligible, to high and marked relationships amongst the *Long-term orientation* items.

Table 4.5

The reliability analysis output for the Revised Long-term Orientation subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.713	.759	5

Inter-Item Correlation Matrix

	LTO1	LTO2	LTO3	LTO4	LTO5	LTO6
LTO1	1.000					
LTO2	.262	1.000				
LTO3	.547	.397	1.000			
LTO4	.304	.191	.422	1.000		
LTO5	.111	.111	.136	.332	1.000	
LTO6	.346	.230	.456	.704	.404	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
LTO1	21.52	7.516	.486	.313	.659
LTO2	22.64	6.520	.359	.163	.761
LTO3	21.56	6.969	.643	.439	.596
LTO4	21.47	8.237	.493	.509	.665
LTO6	21.39	8.406	.555	.531	.655

Item Statistics

	Mean	Std. Deviation	N
LTO1	5.62	.956	325
LTO2	4.50	1.385	325
LTO3	5.58	.928	325
LTO4	5.68	.763	325
LTO6	5.75	.663	325

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	5.430	4.505	5.754	1.249	1.277	.271	5
Item Variances	.943	.439	1.917	1.478	4.365	.335	5
Inter-Item Correlations	.386	.191	.704	.513	3.682	.023	5

4.3.6 Item analysis of Job Satisfaction Revised Dimension Scale

Job satisfaction was measured by means of a 10-item, two-factor structure (intrinsic versus extrinsic factors) Warr, Cook and Wall's (1979) *Job Satisfaction scale* (JSS) (Heritage, Pollock & Roberts, 2015). A study conducted by Heritage et al. (2015) made it clear that this instrument can be used as a 3 factor model (Job itself, Working Conditions and Employee Relations), 2 factor model (Intrinsic and Extrinsic Factors) or a uni-dimensional scale. For this study, we tested reliability of JSS as a unidimensional scale. As indicated in Table 4.6, an internal consistency reliability Cronbach Alpha coefficient of α = .893 was obtained for the *Job Satisfaction* scale; it could be considered as good (Gliem & Gliem, 2003; Pallant, 2016). All the corrected item-total correlation values were larger than .30; also considered acceptable (Pallant, 2016). The item-total statistics indicated that no item deletion would result in an increase in the Cronbach Alpha value. The mean inter-item correlation is .461, with values ranging from .272 to .646, suggesting definite but small to moderate, substantial relationships amongst the *Job Satisfaction* items.

Table 4.6

The reliability analysis output for the Job Satisfaction scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.893	.895	10

Inter-Item Correlation Matrix

	JS1	JS2	JS3	JS4	JS5	JS6	JS7	JS8	JS9	JS10
JS1	1.000									
JS2	.624	1.000								
JS3	.519	.621	1.000							
JS4	.542	.584	.605	1.000						
JS5	.379	.465	.451	.646	1.000					
JS6	.337	.373	.453	.506	.572	1.000				

JS7	.363	.384	.316	.399	.414	.369	1.000			
JS8	.287	.272	.278	.334	.341	.457	.449	1.000		
JS9	.403	.526	.411	.501	.481	.433	.588	.547	1.000	
JS10	.440	.515	.439	.542	.535	.471	.479	.502	.600	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
JS1	37.47	109.009	.596	.459	.886
JS2	37.19	109.449	.676	.581	.880
JS3	37.39	109.856	.630	.500	.883
JS4	37.05	107.670	.722	.598	.876
JS5	36.78	113.588	.660	.531	.882
JS6	37.50	109.522	.605	.444	.885
JS7	37.00	111.997	.572	.401	.887
JS8	37.78	112.043	.524	.410	.891
JS9	37.10	109.678	.696	.564	.878
JS10	36.88	109.384	.701	.516	.878

Item Statistics

	Mean	Std. Deviation	N
JS1	3.87	1.790	325
JS2	4.16	1.591	325
JS3	3.96	1.657	325
JS4	4.30	1.614	325
JS5	4.57	1.353	325
JS6	3.85	1.733	325
JS7	4.35	1.635	325
JS8	3.57	1.746	325
JS9	4.25	1.538	325
JS10	4.47	1.549	325

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4.135	3.569	4.572	1.003	1.281	.099	10
Item Variances	2.640	1.832	3.203	1.371	1.749	.159	10
Inter-Item Correlations	.461	.272	.646	.375	2.380	.010	10

4.3.7 Item analysis of the Revised Organisational Commitment Scale

Organisational commitment was measured by means of a 15- item *Organisational Commitment Questionnaire* (OCQ) developed by Mowday, Steers and Porter (1979). The initial Cronbach Alpha for *Organisational Commitment scale* before review was $\alpha = .714$. After revision and deletion of items OC3, OC7, OC9, OC11 and OC12 which had corrected item-total correlation values less than .30, item-total statistics indicated substantial Alpha increases if these items were deleted, and an internal consistency reliability Cronbach Alpha coefficient of $\alpha = .878$ was obtained for *Organisational Commitment scal*e, which is considered as good (Gliem & Gliem, 2003; Pallant, 2016). The mean inter-item correlation is .428, with values ranging from .139 to .631, suggesting slight, almost negligible, to moderate, substantial relationships amongst the *Organisational commitment* items.

Table 4.7

The reliability analysis output for the Revised Organisational Commitment Questionnaire

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.878	.882	10

Inter-item Correlation matric

	OC1	OC2	OC3	OC4	OC5	OC6	OC7	OC8	OCQ9	OC10	OC11	OC12	OC13	OC14
OC1	1.000													
OC2	.550	1.000												
OC3	.151	.134	1.000											
OC4	.288	.422	-.071	1.000										
OC5	.286	.358	-.036	.541	1.000	.								
OC6	.443	.631	.172	.399	.490	1.000								
OC7	.112	.153	.167	.067	.127	.208	1.000							
OC8	.483	.494	.157	.477	.466	.540	.114	1.000						
OC9	.210	.159	.104	.326	.208	.183	.161	.194	1.000					
OC10	.426	.493	.147	.392	.423	.510	.106	.565	.196	1.000				
OC11	.150	.210	.191	.131	.141	.201	.195	.200	.018	.176	1.000			
OC12	.113	.175	.098	.268	.200	.142	.130	.187	.026	.034	.439	1.000		

OC13	.541	.397	.225	.259	.273	.420	.116	.410	.116	.480	.115	.047	1.000	
OC14	.411	.528	.191	.452	.422	.487	.172	.581	.167	.607	.262	.215	.517	1.000
OC15	.312	.313	.284	.139	.186	.439	.239	.318	.027	.428	.391	.208	.282	.370

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OC1	39.97	96.792	.584	.459	.869
OC2	4.36	9.212	.663	.541	.862
OC4	41.71	88.563	.538	.399	.874
OC5	41.17	9.446	.553	.412	.871
OC6	4.28	89.247	.699	.558	.859
OC8	4.93	86.588	.697	.512	.859
OC10	4.23	9.970	.694	.511	.860
OC13	4.25	94.058	.551	.422	.870
OC14	4.79	86.590	.704	.540	.858
OC15	4.12	96.121	.421	.280	.880

Item Statistics

	Mean	Std. Deviation	N
OC1	5.12	1.112	325
OC2	4.74	1.465	325
OC4	3.38	1.856	325
OC5	3.92	1.668	325
OC6	4.81	1.468	325
OC8	4.16	1.655	325
OC10	4.86	1.358	325
OC13	4.84	1.387	325
OC14	4.30	|1.64|2	325
OC15	4.97	1.505	325

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4.509	3.378	5.120	1.742	1.515	.306	10
Item Variances	2.323	1.236	3.446	2.210	2.789	.380	10
Inter-Item Correlations	.428	.139	.631	.492	4.540	.012	10

4.3.8 Item analysis of Perceived Supervisory Support Scale

The ten-item measure of *Perceived supervisory support (PSS)* that was used in this study was adopted from Anderson, Coffey and Byerly (2002). As indicated in Table 4.8, an internal consistency reliability Cronbach Alpha coefficient of α = .967 was obtained for *Perceived Supervisory Support* scale which is excellent (Gliem & Gliem, 2003; Pallant, 2016). All the corrected item-total correlation values were larger than .30; regarded as acceptable (Pallant, 2016). The item-total statistics indicated that no item would result in an increase in Cronbach Alpha if deleted. The mean inter-item correlation is .751, with values ranging from .657 to .878, suggesting moderate, substantial to high, marked relationships amongst the *Perceived Supervisory Support scale* items.

Table 4.8

The reliability analysis output for Perceived Supervisory Support scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.967	.968	10

Inter-Item Correlation Matrix

	PSS1	PSS2	PSS3	PSS4	PSS5	PSS6	PSS7	PSS8	PSS9	PSS10
PSS1	1.000									
PSS2	.755	1.000								
PSS3	.705	.658	1.000							
PSS4	.754	.690	.855	1.000						
PSS5	.669	.700	.685	.768	1.000					
PSS6	.701	.728	.735	.802	.841	1.000				
PSS7	.763	.754	.742	.810	.805	.838	1.000			
PSS8	.690	.698	.699	.755	.715	.785	.843	1.000		
PSS9	.731	.664	.689	.758	.709	.735	.837	.878	1.000	
PSS10	.689	.657	.733	.779	.712	.739	.835	.842	.844	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
PSS1	37.46	189.638	.809	.709	.965
PSS2	37.75	188.393	.789	.676	.966
PSS3	37.05	192.890	.814	.751	.965
PSS4	37.28	189.387	.880	.829	.963
PSS5	37.99	184.802	.830	.755	.965
PSS6	37.79	186.172	.873	.812	.963
PSS7	37.57	186.357	.918	.853	.961
PSS8	37.61	187.566	.871	.838	.963
PSS9	37.58	188.725	.863	.833	.963
PSS10	37.37	187.580	.860	.798	.963

Item Statistics

	Mean	Std. Deviation	N
PSS1	4.25	1.740	325
PSS2	3.97	1.832	325
PSS3	4.67	1.593	325
PSS4	4.44	1.627	325
PSS5	3.73	1.905	325
PSS6	3.93	1.769	325
PSS7	4.15	1.686	325
PSS8	4.11	1.715	325
PSS9	4.13	1.683	325
PSS10	4.34	1.735	325

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4.172	3.729	4.671	.942	1.252	.073	10
Item Variances	2.996	2.536	3.630	1.094	1.431	.104	10
Inter-Item Correlations	.751	.657	.878	.222	1.337	.004	10

4.3.9 Item analysis of Perceived Organisational Support Scale

Perceived Organisational Support (POS) was measured with a short-version, 8-item measure that was developed by Dawley, Houghton and Buckley (2010) from the original 36-item POS measure of Eisenberger, Huntington, Hutchinson and Sowa (1986) by selecting eight items that loaded the highest onto POS construct. As indicated in Table 4.9, an internal consistency reliability Cronbach Alpha coefficient of α = .766 was obtained for *Perceived Organisational Support scale*, which is considered acceptable (Gliem & Gliem, 2003; Pallant, 2016). All the corrected item-total correlation values were larger than .30, which is again considered acceptable (Pallant, 2016). The item-total statistics indicated that none of the items would result in an increase in Cronbach Alpha if deleted. The mean inter-item correlation is .290, with values ranging from .108 to .629, suggesting slight, almost negligible to moderate, substantial relationships among the *Perceived Organisational Support scale* items.

Table 4.9

The reliability analysis output for Perceived Organisational Support scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.766	.766	8

Inter-Item Correlation Matrix

	POS1	POS2	POS3	POS4	POS5	POS6	POS7	POS8
POS1	1.000							
POS2	.059	1.000						
POS3	.134	.573	1.000					
POS4	.580	.023	.105	1.000				
POS5	.139	.570	.552	.097	1.000			
POS6	.545	.080	.176	.629	.046	1.000		
POS7	.099	.520	.519	.082	.619	.135	1.000	
POS8	.498	.007	.094	.572	.065	.622	-.008	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
POS1	25.66	49.331	.461	.412	.742
POS2	26.05	49.319	.424	.443	.748
POS3	25.90	47.327	.502	.439	.734
POS4	25.84	49.081	.467	.507	.741
POS5	25.90	48.122	.489	.520	.737
POS6	25.90	48.357	.505	.550	.734
POS7	25.88	48.721	.457	.467	.742
POS8	25.88	5.151	.407	.471	.751

Item Statistics

	Mean	Std. Deviation	N
POS1	3.91	1.541	325
POS2	3.52	1.628	325
POS3	3.67	1.672	325
POS4	3.74	1.555	325
POS5	3.67	1.613	325
POS6	3.67	1.553	325
POS7	3.69	1.619	325
POS8	3.70	1.570	325

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.697	3.523	3.914	.391	1.111	.012	8
Item Variances	2.543	2.375	2.797	.421	1.177	.022	8
Inter-Item Correlations	.290	.108	.629	.637	-76.565	.060	8

4.3.10 Item analysis of Turnover Intention Measure Scale

As indicated in Table 4.10, an internal consistency reliability Cronbach Alpha coefficient of α = .676 was obtained for *Turnover intention* scale, which is considered inadequate (Gliem & Gliem, 2003; Pallant, 2016). All the corrected item-total correlation values were larger than .30, which is considered acceptable (Pallant, 2016). The item-total statistics indicated that none of the items would result in an increase in Cronbach Alpha if deleted. The mean inter-item

correlation is .344, with values ranging from .064 to .529, suggesting slight, almost negligible to moderate, substantial relationships amongst the *Turnover intention* items.

Table 4.10

The reliability analysis output for Turnover Intention scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.676	.677	4

Inter-Item Correlation Matrix

	ITS1	ITS2	ITS3	ITS4
ITS1	1.000			
ITS2	.064	1.000		
ITS3	.245	.477	1.000	
ITS4	.529	.303	.445	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ITS1	9.86	18.383	.359	.293	.672
ITS2	8.87	18.078	.360	.252	.674
ITS3	9.12	16.442	.535	.330	.560
ITS4	9.75	15.243	.595	.402	.514

Item Statistics

	Mean	Std. Deviation	N
ITS1	2.67	1.826	325
ITS2	3.67	1.876	325
ITS3	3.41	1.780	325
ITS4	2.78	1.858	325

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.134	2.671	3.668	.997	1.373	.233	4
Item Variances	3.368	3.169	3.519	.350	1.110	.024	4
Inter-Item Correlations	.344	.064	.529	.464	8.208	.028	4

4.4. DIMENSIONALITY ANALYSIS

The purpose of dimensionality analysis is to establish the number of components/factors/dimensions a scale consists of (Pallant, 2016). Stated differently, Steenkamp and Van Trijp (1991) maintain that dimensionality analysis allows for establishing whether a measure consists of a single dimension, *i.e.* is unidimensional, or more than one dimensions, *i.e.* is multidimensional so as not to distort observations and analysis. In this section, the exploratory factor analysis (EFA) results, which incorporate dimensionality analysis, of the various measures/scales utilised in this study are presented. Dimensionality analysis was conducted by means of SPSS (Release 23; 2015) utilising the Data Reduction, Factor Analysis function. Principal Axis Factoring (PAF) with Direct Oblimin rotation was used for factor extraction. The output includes statistics on the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy value, the Bartlett's Test of Sphericity test, the degrees of freedom (*df*) and the significance level which would be inspected to either reject or accept the null hypothesis and determine whether there is sufficient evidence that the correlation matrix of the scale was factor analysable (Pallant, 2016).

4.4.1 The dimensionality analysis output for the Collectivism cultural value dimension

Dimensionality analysis of the *Collectivism* subscale returned a KMO[3] measure of sampling adequacy value of .815 and the Bartlett's Test of Sphericity test statistic value of 59.439 (*df*= 15; p = .00) which allowed for the identity matrix null hypothesis to be rejected. There was,

[3]To be considered suitable for factor analysis, the Kaiser-Meyer-Olkin (KMO) value should be .6 or above (KMO ≥.6)

therefore, sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016).

One factor with an eigenvalue greater than 1 was obtained, explaining 51.93% variance of the factor. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the items loaded on one factor satisfactorily, since all factor loadings were larger than .5. The resultant factor structure is shown in Table 4.11. Furthermore, none of the residual correlations were larger than .05 suggesting that the factor solution provided a credible explanation for the observed inter-item correlation matrix. The uni-dimensionality assumption was thus corroborated.

Table 4.11

Factor matrix for the Collectivism subscale

	Factor 1
col1	.563
col2	.581
col3	.706
col4	.680
col5	.685
col6	.684

4.4.2 The dimensionality analysis output for the Power Distance scale

Dimensionality analysis of the *Power distance* subscale returned a KMO measure of sampling adequacy value of .769 and the Bartlett's Test of Sphericity test statistic value of 434.114 (*df* = 10; p = .00) which allowed for the identity matrix null hypothesis to be rejected. Therefore, there was sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016).

Only one factor with an eigenvalue greater than 1 was obtained, explaining 53.15% variance of the factor. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the items loaded on one factor satisfactorily since all factor loadings were larger than .3. The resultant factor structure is shown in Table 4.12. Furthermore, none of the residual correlations were larger than .05 suggesting that the factor solution provided a credible explanation for the observed inter-item correlation matrix. The uni-dimensionality assumption was thus corroborated.

Table 4.12

Factor matrix for the Power Distance subscale

	Factor 1
PD1	.668
PD2	.751
PD3	.697
PD4	.673
PD5	.411

4.4.3 The dimensionality analysis output for the Uncertainty Avoidance scale

Dimensionality analysis of the *Uncertainty avoidance* subscale returned a KMO measure of sampling adequacy value of .758 and the Bartlett's Test of Sphericity test statistic value of 593.333 (df = 10; p = .00) which allowed for the identity matrix null hypothesis to be rejected. There was, therefore, sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016).

Only one factor with an eigenvalue greater than 1 was obtained, explaining 57.459% variance of the factor. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the items loaded on one factor satisfactorily since all factor loadings were larger than .5. The resultant factor structure is shown in Table 4.13. Furthermore, none of the residual correlations were larger than .05 suggesting that the factor solution provided a credible explanation for the observed inter-item correlation matrix. The uni-dimensionality assumption was thus corroborated.

Table 4.13

Factor matrix for the Uncertainty Avoidance subscale

	Factor 1
UA1	.502
UA2	.690
UA3	.789
UA4	.727
UA5	.703

4.4.4 The dimensionality analysis output for the Masculinity scale

Dimensionality analysis of the *Masculinity* subscale returned a KMO measure of sampling adequacy value of .744 and the Bartlett's Test of Sphericity test statistic of 329.211 (*df* = 6; p = .00) which allowed for the identity matrix null hypothesis to be rejected. There was, therefore, sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016).

Only one factor with an eigenvalue greater than 1 was obtained, explaining 58.311% variance of the factor. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the items loaded on one factor satisfactorily as all factor loadings were larger than .50 with the exception of item MASC4 which was marginally below .5. The resultant factor structure is shown in Table 4.14. Furthermore, none of the residual correlations were larger than .05 suggesting that the factor solution provided a credible explanation for the observed inter-item correlation matrix. The uni-dimensionality assumption was thus corroborated.

Table 4.14

Factor matrix for the Masculinity subscale

	Factor 1
MASC1	.616
MASC2	.707
MASC3	.848
MASC4	.494

4.4.5 The dimensionality analysis output for the Revised Long-term Orientation scale

Dimensionality analysis of the *Long-term orientation* culture subscale returned a KMO measure of sampling adequacy value of .706 and the Bartlett's Test of Sphericity test statistic of 48.472 ($df = 10$; $p = .00$) which allowed for the identity matrix null hypothesis to be rejected. There was, therefore, sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Only one factor with an eigenvalue greater than 1 was obtained, explaining 51.631% variance of the factor. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the items loaded on one factor satisfactorily since all factor loadings were larger than .50 with the exception of LTO2 which had a loading of .393. The resultant factor structure is shown in Table 4.15. Furthermore, none of the residual correlations were larger than .05 suggesting that the factor solution provided a credible explanation for the observed inter-item correlation matrix. The uni-dimensionality assumption was thus corroborated.

Table 4.15

Factor matrix for the Revised Long-term Orientation subscale

	Factor 1
LTO1	.564
LTO2	.393
LTO3	.726
LTO4	.693
LTO6	.746

4.4.6 The dimensionality analysis output for the *Revised* Job Satisfaction scale

Exploratory factor analysis could not corroborate uni-dimensionality of the *Job satisfaction* scale. The initial round of exploratory factor analysis indicated the existence of two factors. Two of the 10 items, namely items JS5 and JS6, were identified as complex items because they loaded on more than one factor and the difference between them was less than .250 (Cabrera-Nguyen, 2010). These items were removed and another round of exploratory factor analysis was performed, and two factors were maintained. These two factors explained 51.782% and 11.253% of the factor variance, respectively. The subsequent amended *Job satisfaction subscale* achieved a KMO measure of sampling adequacy value of .882 and the Bartlett's Test of Sphericity test statistic of 1159.207 (df = 28; p = .00) which allowed for the identity matrix null hypothesis to be rejected. There was, therefore, sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016).

The rotated factor matrix depicted in Table 4.16 shows the loading of the items on the two factors underlying the *Job Satisfaction scale*. The identities of the two factors were subsequently determined based on the common themes emerging from the items loading on each of the two factors. Factor 1 relates to employee satisfaction with the job itself. Factor 2 generally relates employee satisfaction with work conditions. The two factors will be used to indicate the Job satisfaction variable.

Table 4.16

Pattern matrix for the Revised Job Satisfaction scale

	Factor	
	1	2
JS1	.687	.008
JS2	.808	.100
JS3	.790	.050
JS4	.712	.136
JS7	.058	.626
JS8	.152	.801
JS9	.123	.707
JS10	.260	.634

4.4.7 The dimensionality analysis output for the Organisational Commitment Questionnaire

First-round dimensionality analysis of the *Organisational Commitment Questionnaire* indicated the existence of two factors for the Organisational Commitment scale. Subsequently, six of the 15 items, namely items OCQ3, OCQ5, OCQ7, OCQ9, OCQ11 and OCQ12 were identified as complex items because they loaded on more than one factor and the differences between the pairs of factor loadings were all less than .25. These items were deleted and excluded, and a further round of exploratory factor analysis was performed, resulting in the retaining of one factor. This factor explained 5.765% of the variance.

The dimensionality analysis of *Organisational Commitment* subscale returned a KMO measure of sampling adequacy value of .877 and the Bartlett's Test of Sphericity test statistic of 1208.920 (df = 36; p = .00) which allowed for the identity matrix null hypothesis to be rejected. There was, therefore, sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). The scree plot also corroborated that a single factor should be extracted. The factor matrix indicated that all the items loaded on one factor satisfactorily as all factor loadings were larger than .5. The resultant factor structure is shown in Table 4.17. Furthermore, none of the residual correlations were larger than .05 suggesting that the factor solution provided a credible explanation for the observed inter-item correlation matrix. The uni-dimensionality assumption was thus corroborated.

Table 4.17

Factor matrix for the Revised Organisational Revised Commitment scale

	Factor1
OCQ1	.647
OCQ2	.730
OCQ6	.733
OCQ10	.742
OCQ13	.619
OCQ14	.754
OCQ15	.480
OCQ4	.530
OCQ8	.738

4.4.8 The dimensionality analysis output for the PSS scale

Dimensionality analysis of the *Perceived supervisory support* subscale returned a KMO measure of sampling adequacy value of .943 and the Bartlett's Test of Sphericity test statistic value of 3828.665 (*df* = 45; p = .00) which allowed for the identity matrix null hypothesis to be rejected. There was, therefore, sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016).

Only one factor with an eigenvalue greater than 1 was obtained, explaining 77.641% variance of the factor. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the items loaded on one factor satisfactorily because all factor loadings were larger than .5. The resultant factor structure is shown in Table 4.18. Furthermore, none of the residual correlations were larger than .05 suggesting that the factor solution provided a credible explanation for the observed inter-item correlation matrix. The uni-dimensionality assumption was thus corroborated.

Table 4.18

Factor matrix for the Perceived Supervisory Support scale

	Factor 1
PSS1	.822
PSS2	.801
PSS3	.830
PSS4	.897
PSS5	.845
PSS6	.887
PSS7	.935
PSS8	.889
PSS9	.880
PSS10	.878

4.4.9 The dimensionality analysis output for the POS scale

Exploratory factor analysis could not corroborate the unidimensional structure of the *Perceived organisational support* scale. The first round of exploratory factor analysis showed the existence of two factors. These two factors explained 38.008% and 29.684% of the variance, respectively. The Pattern factor matrix depicted in Table 4.19 shows the loadings of the items on the two factors underlying the *Perceived organisational support* scale. The scale subsequently achieved a KMO measure of sampling adequacy value of .790 and the Bartlett's Test of Sphericity test statistic obtained a value of 103.817 (df = 28; p = .00) which allowed for the identity matrix null hypothesis to be rejected. There was, therefore, sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Field, 2005). The identities of the two factors were subsequently determined based on the common themes emerging from the items loading on each of the two factors. Factor 1 relates to one's perceptions of the Organisation's reciprocal engagements with employees. This factor was termed *Perceived reciprocation*. Factor 2 generally relates to the perception of the organisation's admiration of employees' efforts, and was termed *Perceived admiration*. The two factors will be used to indicate the *Perceived organisational support*.

Table 4.19

Pattern matrix for the Perceived Organisational Support scale

	Factor	
	1	2
POS1	.695	.143
POS2	.056	.738
POS3	.166	.727
POS4	.792	.103
POS5	.111	.789
POS6	.807	.142
POS7	.102	.739
POS8	.740	.052

4.4.10 The dimensionality analysis output for the Turnover Intention scale

The uni-dimensionality of the *Turnover intention* scale could not be corroborated. The initial round of exploratory factor analysis showed the existence of two factors. These two factors explained 51.380% and 26.092% of the variance, respectively. The rotated pattern matrix depicted in Table 4.20 shows the loadings of the items on the two factors underlying the *Turnover Intention*. The scale returned a KMO measure of sampling adequacy value of .616 and the Bartlett's Test of Sphericity test statistic value of 269.867 (df = 6; p = .00) which allowed for the identity matrix null hypothesis to be rejected. There was, therefore, sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Field, 2005).

The identities of the two factors were subsequently determined based on the common themes emerging from the items loading on each of the two factors. Factor 1 relates to the existence of a prospective job leaving plan. This factor was termed *Anticipated leaving plan*. Factor 2 generally relates to prospective voluntary resignation and was termed *Anticipated voluntary resignation*. The two factors will be used to indicate the *Turnover intention* variable.

Table 4.20

Pattern matrix for the Turnover Intention scale

	Factor	
	1	2
ITS1	.732	.179
ITS2	.175	.711
ITS3	.404	.691
ITS4	.751	.497

4.5. EVALUATING THE FIT OF THE MEASUREMENT MODELS VIA CONFIRMATORY FACTOR ANALYSIS IN LISREL

One variable of the study, culture, was conceptualised as multidimensional. The scales used to operationalise this variable therefore necessarily had to reflect the multidimensional nature of the latent variables they were meant to reflect. The item and dimensionality analyses for the measure of this latent variable was performed separately for each of the subscales of the instrument. To formally examine the construct validity of the measure, confirmatory factor analysis (CFA) had to be performed. The fit of the measurement model describing the manner in which the composite indicator variables were earmarked to represent specific latent variables in the structural model is subsequently discussed.

The measurement model represents the relationship between the latent variable and its manifest indicators, and is expressed by Equation 4.1:

$$\mathbf{X = \Lambda X \xi + \delta} \text{ ---------- } 4.1$$

The symbol ΛX represents the p x m matrix of factor loading coefficients (λ), which indicate the loading of the p composite indicators on their designated latent variable. The vector of latent variables is signified by the symbol ξ (ksi), whereas the symbol δ (delta) is used to indicate a vector of measurement error terms (Diamantopoulos & Siguaw, 2000). X represents a vector of composite indicator variables. Ultimately, the purpose of the confirmatory factor analysis is to determine whether the operationalisation of the latent variables comprising the measurement model in terms of item indicators was successful. The operationalisation can be

considered successful if the measurement models specified in equation 4.1 can successfully reproduce the observed covariance matrix (*i.e.* if the model fits well) and if the measurement model parameter estimates indicate that the majority of the variance in the indicator variables can be explained in terms of the latent variables they were designed to reflect. Equation 4.2 describes the expression through which the reproduced covariance matrix is derived from the measurement model parameter estimates (Brown, 2006).

$$\boldsymbol{\Sigma = \Lambda X \Psi \Lambda' X + \Theta} \quad \text{---------- 4.2}$$

$\boldsymbol{\Sigma}$ is the p x p symmetric covariance matrix for the p composite indicators.

The credibility of the measurement model was judged based on the RMSEA, p-value for the test close fit index, as well as the absolute, comparative, relative and incremental fit indices. The completely standardised factor loadings are also discussed in order to evaluate the strength of the indicator factor loadings on the latent variable.

4.5.1 Evaluating the fit of the revised CVSCALE measurement model

The design of the CVSCALE implies the measurement model expressed as Equation 4.3.

$$\mathbf{X = \Lambda X \xi + \delta} \quad \text{---------- 4.3}$$

Where $\mathbf{X}$ is a 26 by 1 column vector of items, $\boldsymbol{\Lambda X}$ is a 26 by 5 matrix of factor loadings, $\boldsymbol{\xi}$ is a 5 x 1 column vector of latent cultural value dimensions and $\boldsymbol{\delta}$ is a 26 x 1 column vector of measurement error terms. CVSCALE is a 26-item five-dimensional instrument for measuring cultural value dimensions of Collectivism, Power distance, Uncertainty avoidance, Masculinity and Long-term orientation at individual level, developed by Yoo, *et al*. (2011).

Confirmatory factor analysis (CFA) was performed on the items of the revised CVSCALE. For the purposes of confirmatory factor analysis, the measurement model was treated as an exogenous model simply due to programming advantages. The imputed data was first read into PRELIS (Jöreskog & Sörbom, 1996) to compute a covariance matrix and an asymptotic covariance matrix to serve as input for the LISREL analysis. All variables were defined as continuous. Robust maximum likelihood estimation was used to estimate the parameters set free in the model because of the lack of multivariate normality in the data.

The measurement model converged in 12 iterations. The full spectrum of fit statistics is shown in Table 4.21. An examination of the goodness-of-fit indices indicates that the model has achieved reasonable model fit (Diamantopoulos & Siguaw, 2000). A sample [4]RMSEA value of .0582 indicates a reasonable fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90 percent confidence interval for RMSEA (.0517; .0647) is around the critical cut-off value of .05, thereby confirming a reasonable model fit. The results are depicted in Table 4.21.

Table 4.21

Goodness-of- fit statistics of the Revised CVCSALE measurement model

Goodness of Fit Statistics

Degrees of Freedom	289
Minimum Fit Function Chi-Square	602.038 (P = .0)
Normal Theory Weighted Least Squares Chi-Square	631.609 (P = .0)
Satorra-Bentler Scaled Chi-Square	605.820 (P = .0)
Chi-Square Corrected for Non-Normality	3382.566 (P = .0)
Estimated Non-Centrality Parameter (NCP)	316.820
90 Percent Confidence Interval for NCP	(25.005; 391.391)
Minimum Fit Function Value	1.858
Population Discrepancy Function Value (F0)	.978
90 Percent Confidence Interval for F0	(.772; 1.208)
Root Mean Square Error of Approximation (RMSEA)	.0582
90 Percent Confidence Interval for RMSEA	(.0517; .0647)
P-Value for Test of Close Fit (RMSEA < .05)	.0200
Expected Cross-Validation Index (ECVI)	2.253
90 Percent Confidence Interval for ECVI	(2.046; 2.483)
ECVI for Saturated Model	2.167
ECVI for Independence Model	13.712
Chi-Square for Independence Model with 325 Degrees of Freedom	439.576
Normed Fit Index (NFI)	.862
Non-Normed Fit Index (NNFI)	.912
Parsimony Normed Fit Index (PNFI)	.767
Comparative Fit Index (CFI)	.922
Incremental Fit Index (IFI)	.923
Relative Fit Index (RFI)	.845
Critical N (CN)	187.036
Root Mean Square Residual (RMR)	.107
Standardized RMR	.0627
Goodness of Fit Index (GFI)	.870
Adjusted Goodness of Fit Index (AGFI)	.842
Parsimony Goodness of Fit Index (PGFI)	.716

[4] According to Diamantopoulos & Siguaw (2000), the cut-off values of the RMSEA are as follows;
< .05, good fit;
.05 but < .08, reasonable fit;
.08 to .10, mediocre fit;
> .10, poor fit.

LISREL 8.80 also explicitly tests the null hypothesis of close fit. Table 4.21 indicates that the null hypothesis of close model fit (H_{02}: RMSEA ≤ .05) is rejected at a 5% significance level ($p < .05$), with a p-value for Test of Model Fit of .0200, failing to provide evidence of close fit of the model. The RMR of .107 indicates a mediocre fit; the standardised RMR value of .062 marginally misses the good model fit (< .05) level.

The results of the incremental fit measures in Table 4.21 indicate that, when compared to a baseline model, the revised CVSCALE measurement model achieved NNFI (.912), CFI (.922), IFI (.923) indices, which exceeded .90 threshold, while NFI (.862), RFI (.845) and GFI (.870) marginally missed the cut-off level of .90, depicting a reasonable fit (Diamantopoulos & Siguaw, 2000; Hair *et al*., 2010). Therefore, these relative indices seem to portray a moderately positive picture of model fit.

4.5.1.1 The unstandardised lambda-X matrix

The unstandardised Lambda-X matrix provides an indication of the statistical significance of the slope of the regression of the observed variables onto their respective latent variables. It also provides an indication of the validity of the measures. In other words, if a measure is designed to provide a valid reflection of a specific latent variable, then the slope of the regression of Xi on ξj in the fitted measurement model has to be substantial and significant (Diamantopoulos & Siguaw, 2000). The unstandardized **Λx** matrix contains the regression coefficients of the regression of the manifest variables on the latent variables they were linked to. The regression coefficients of the manifest variables on the latent variables are significant ($p < .05$) if the t-values, as indicated in the matrix, exceed |1.65| at $p < .05$ (Anuwichanont, & Mechinda, 2011; Parasuraman *et al*., 2005). Significant indicator loadings provide validity evidence in favour of the indicators (Diamantopoulos & Siguaw, 2000). As indicated in Table 4.22, all the revised CVSCALE manifest variables loaded significantly ($p < .01$) on the latent variables that they were designed to reflect. In the Lambda-X matrix, the t-values (highlighted in Table 4.22) appear directly under the standard error estimates in brackets. Significant loadings confirm the validity of the indicators (Diamantopoulos & Siguaw, 2000).

Table 4.22

Unstandardised Lambda-X matrix of the Revised CVCSALE

	COLLECT	POWER	UA	MASC	LTO
	--------	--------	--------	--------	--------
Col1	.906 (.091) 1.005	- -	- -	- -	- -
Col2	.925 (.087) 1.601	- -	- -	- -	- -
Col3	31.044 (.074) 14.170	- -	- -	- -	- -
Col4	1.124 (.082) 13.758	- -	- -	- -	- -
Col5	1.130 (.083) 13.680	- -	- -	- -	- -
Col6	1.190 (.084) 14.174	- -	- -	- -	- -
PD1	- -	.695 (.071) 9.757	- -	- -	- -
PD2	- -	.971 (.069) 14.164	- -	- -	- -
PD3	- -	.877 (.072) 12.213	- -	- -	- -
PD4	- -	.937 (.077) 12.242	- -	- -	- -
PD5	- -	.599 (.088) 6.802	- -	- -	- -
UA1	- -	- -	.593 (.057) 1.352	- -	- -
UA2	- -	- -	.465 (.045) 1.429	- -	- -
UA3	- -	- -	.496 (.039) 12.816	- -	- -
UA4	- -	- -	.470 (.042) 11.247	- -	- -
	COLLECT	POWER	UA	MASC	LTO
	--------	--------	--------	--------	--------
UA5	- -	- -	.507 (.042) 11.954	- -	- -
MASC1	- -	- -	- -	.769	- -

				(.089) 8.606	
MASC2	- -	- -	- -	1.214 (.091) 13.411	- -
MASC3	- -	- -	- -	1.402 (.069) 2.391	- -
MASC4	- -	- -	- -	.995 (.102) 9.784	- -
LTO1	- -	- -	- -	- -	.498 (.074) 6.769
LTO2	- -	- -	- -	- -	.518 (.073) 7.063
LTO3	- -	- -	- -	- -	.568 (.065) 8.779
LTO4	- -	- -	- -	- -	.512 (.059) 8.736
LTO6	- -	- -	- -	- -	.479 (.053) 9.098

Although the unstandardised Lambda-X matrix indicates that the factor loadings are significant, Diamantopoulos and Siguaw (2000) warn against absolute reliance on unstandardised loadings and their associated t-values. The problem is that it may be difficult to compare the validity of different indicators measuring a particular construct. This is because indicators of the same construct may be measured on very different scales. Hence, direct comparisons of the magnitudes of the loadings are inappropriate. Furthermore, since each latent variable has to be assigned a scale by fixing the loadings of one of its indicators to a unit, the loadings of the other indicators for that latent variable are only interpretable relative to the unit of the reference indicator. If a different indicator is used as the reference variable, the magnitudes of the loadings will change, hence the magnitudes of the standardised loadings should also be inspected (Diamantopoulos & Siguaw, 2000). The standardised loadings are shown in Table 4.23.

Table 4.23

Completely standardised factor loading estimates for the revised CVSALE (first-order)

	COLLECT	POWER	UA	MASC	LTO
COL1	.561	--	--	--	--
COL2	.574	--	--	--	--
COL3	.713	--	--	--	--
COL4	.695	--	--	--	--
COL5	.666	--	--	--	--
COL6	.664	--	--	--	--
PD1	--	--	.691	--	--
PD2	--	--	.791	--	--
PD3	--	--	.655	--	--
PD4	--	--	.660	--	--
PD5	--	--	.408	--	--
UA1	--	--	--	.541	--
UA2	--	--	--	.658	--
UA3	--	--	--	.784	--
UA4	--	--	--	.749	--
UA5	--	--	--	.750	--
MASC1	--	--	--	--	.594
MASC2	--	--	--	--	.713
MASC3	--	--	--	--	.857
MASC4	--	--	--	--	.507
LTO1	--	--	--	--	.521
LTO2	--	--	--	--	.374
LTO3	--	--	--	--	.612
LTO4	--	--	--	--	.671
LTO6	--	--	--	--	.723

Table 4.23 gives the completely standardised factor loadings. The values shown in the completely standardised solution loading matrix represent the slopes of the regression of the standardised items on the standardised latent culture dimension that the item was designed to represent. Therefore, the completely standardised loadings indicate the average change expressed in standard deviations in the item associated with one standard deviation change in the latent variable. The factor loadings of the items are generally satisfactorily large (> .50) with the exception of items PD5 and LTO2 with loadings of .408 and .374 respectively, which are still considered acceptable.

Table 4.24 portrays the correlations between the five latent revised CVSCALE dimensions. These correlations reflect the correlations between the five revised CVSCALE subscales, corrected for the attenuating effect of random and systematic measurement error. The correlations fall within reasonable limits, as high values (above .90) may indicate multi-collinearity (Tabachnick & Fidell, 2007).

An integration of the available evidence on the fit of the revised CVSCALE measurement model points to a reasonable model fit. The fit statistics in Table 4.21 indicates a generally reasonable fitting model. The model did not succeed in achieving a close fit, and the standardised RMR value was marginally above .05. The NNFI (.912), CFI (.922), IFI (.923) indices exceeded .90 while NFI (.862), RFI (.845) and GFI (.870) marginally missed the cut-off level of .90, depicting a reasonable fit. The AGFI and the PGF1 both failed to meet the .90 level. Negative correlations ranging between -.312 to -.032 were observed between power distance and each of collectivism, uncertainty avoidance and long-term orientation as well as between masculinity and uncertainty avoidance. The rest of the correlations were positive, ranging from .068 to .499. None of the items correlate above .9. The completely standardised factor loadings are generally acceptable.

Table 4.24

Inter-correlations between the revised latent CVSCALE factors

	COLLECT	POWER	UA	MASC	LTO
COLLECT	1.000				
POWER	-.032	1.000			
UA	.158	-.312	1.000		
MASC	.068	.216	-.128	1.000	
LTO	.180	-.207	.499	.108	1.000

4.5.2 Evaluating the fit of the Revised Job Satisfaction Scale measurement model

Confirmatory factor analysis (CFA) was also performed on the items of the Revised Job Satisfaction Scale (JSS). The same procedures used for conducting CFA for the revised CVSCALE described in paragraph 4.5.1 regarding treatment of the measurement model as an exogenous model, reading of data into PRELIS, computation of an asymptotic covariance matrix, defining all variables as continuous and utilising robust maximum likelihood estimation, were all also applied in this case.

The measurement model converged in 5 iterations. The full spectrum of fit statistics is shown in Table 4.25. An examination of the goodness-of-fit indices indicates that the model has achieved good model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of. .043

indicates a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90 percent confidence interval for RMSEA (.0047; .071) is .071, thereby confirming at least a reasonable model fit. The results are depicted in Table 4.25.

Table 4.25 indicates that the null hypothesis of close model fit (RMSEA ≤ .05) is not rejected at a 5% significance level (p < .05), indicating a good fit. The RMR of .11 indicates a mediocre fit; the standardised RMR value of .039 which is well below the cut-off value (< .05), further confirms the good model fit level.

Table 4.25

Goodness-of- fit statistics of the Revised Job Satisfaction Scale measurement model

Goodness of Fit Statistics

Degrees of Freedom	19
Minimum Fit Function Chi-Square	47.13 (P = .00034))
Normal Theory Weighted Least Squares Chi-Square	43.75 (P = .0010
Satorra-Bentler Scaled Chi-Square	3.36 (P = .047)
Chi-Square Corrected for Non-Normality	38.84 (P = .0046)
Estimated Non-Centrality Parameter (NCP)	11.36
90 Percent Confidence Interval for NCP	(.14; 3.47)
Minimum Fit Function Value	.15
Population Discrepancy Function Value (F0)	.035
90 Percent Confidence Interval for F0	(.00042; .095))
Root Mean Square Error of Approximation (RMSEA)	.043
90 Percent Confidence Interval for RMSEA	(.0047; .071)
P-Value for Test of Close Fit (RMSEA < .05)	.62
Expected Cross-Validation Index (ECVI)	.20
90 Percent Confidence Interval for ECVI	(.17; .26)
ECVI for Saturated Model	.23
ECVI for Independence Model	6.51
Chi-Square for Independence Model with 325 Degrees of Freedom	2066.35
Normed Fit Index (NFI)	.99
Non-Normed Fit Index (NNFI)	.99
Parsimony Normed Fit Index (PNFI)	.67
Comparative Fit Index (CFI)	.99
Incremental Fit Index (IFI)	.99
Relative Fit Index (RFI)	.98
Critical N (CN)	382.49
Root Mean Square Residual (RMR)	.11
Standardized RMR	.039
Goodness of Fit Index (GFI)	.97
Adjusted Goodness of Fit Index (AGFI)	.94
Parsimony Goodness of Fit Index (PGFI)	.56

The results of the incremental fit measures in Table 4.25 indicate that, when compared to a baseline model, the revised JSS measurement model achieved NNFI (.99), CFI (.97), IFI (.99), NFI (.99), RFI (.98) and GFI (.97) indices, all exceeding .90 threshold, depicting a good fit (Diamantopoulos & Siguaw, 2000; Hair *et al*., 2010). These relative indices seem to portray a very positive picture of model fit.

4.5.2.1 The unstandardised lambda-X matrix

As indicated in Table 4.26, all the revised Job Satisfaction Scale manifest variables loaded significantly on the latent variables that they were designed to reflect. In the Lambda-X matrix, the t-values (highlighted in Table 4.26) appear directly under the standard error estimates in brackets. Significant loadings confirm the validity of the indicators (Diamantopoulos & Siguaw, 2000).

Table 4.26

Unstandardised Lambda-X matrix of the Revised Job Satisfaction Scale

	JS_1	JS_2
	--------	--------
JS1	1.29 (.09) 14.15	- -
JS2	1.29 (.09) 17.63	- -
JS3	1.28 (.07) 17.07	- -
JS4	1.24 (.07) 16.87	- -
JS7	- -	1.11 (.09) 1183
JS8	- -	1.12 (.09) 12.78
JS9	- -	1.29 (.07) 19.18
JS10	- -	1.18 (.08) 15.57

Table 4.27 gives the completely standardised factor loadings. All the factor loadings of the items are generally satisfactorily large (> .50).

Table 4.28 portrays the correlation between the two latent revised Job Satisfaction Scale dimensions. This correlation reflects the correlation between the two Job Satisfaction Scale subscales, corrected for the attenuating effect of random and systematic measurement error. The correlation falls within reasonable limit, as high values (above .90) may indicate multi-collinearity (Tabachnick & Fidell, 2007).

Table 4.27

Completely standardised factor loading estimates for the Revised Job Satisfaction Scale (first-order)

	JS_1	J_2
JS1	.72	- -
JS2	.81	- -
JS3	.77	- -
JS4	.77	- -
JS7	- -	.68
JS8	- -	.64
JS9	- -	.83
JS10	- -	.76

An integration of the available evidence on the fit of the revised Job Satisfaction Scale measurement model points to a good model fit. The fit statistics in Table 4.25 indicates a generally reasonable fitting model. The model succeeded in achieving a close fit. The NNFI (.99), CFI (.99), IFI (.99) NFI (.99), RFI (.99), GFI (.97) and the AGFI (.94) indices all exceeded the cut-off level of .90, depicting a good fit; only the PGF1 (.51) failed to meet the .90 level. A positive correlation of .673 was observed between the two dimensions of the JSS, which is well below .9. The completely standardised factor loadings are generally acceptable.

Table 4.28

Inter-correlations between latent Job Satisfaction Scale factors

	JS_1	JS_2
JS_1	1.000	
JS_2	.673	1.000

4.5.3 Evaluating the fit of the Revised Organizational Commitment Questionnaire measurement model

Confirmatory factor analysis (CFA) was also performed on the items of the Revised Organizational Commitment Questionnaire (OCQ). Initially CFA analysis was conducted on the Revised OCQ excluding the six items of OCQ3, OCQ5, OCQ7, OCQ9, OCQ11 and OCQ12 that were identified through reliability analysis and EFA as problematic items. A mediocre fit indicated by a RMSEA of .088 was established with the first analysis. Careful inspection of the theta-delta modification indices resulted in the deletion of items OCQ1, OCQ2, OCQ4, OCQ10 and OCQ 15. Further CFA was conducted with the remaining items. The measurement model converged in 4 iterations. The full spectrum of fit statistics is shown in Table 4.29. An examination of the goodness-of-fit indices indicates that the model has achieved reasonable model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .053 indicates a reasonable fit (Diamantopoulos & Siguaw, 2000). The relatively low lower bound of .0 confirms reasonable model fit.

Table 4.29 indicates that the null hypothesis of close model fit (RMSEA $\leq$ .05) is not rejected at a 5% significance level ($p < .05$), indicating a good fit. The RMR of .05 and the standardised RMR value of .021 further indicates a reasonable fit.

Table 4.29

Goodness-of- fit statistics of the Revised Organizational Commitment Questionnaire measurement model

Goodness of Fit Statistics

Degrees of Freedom	2
Minimum Fit Function Chi-Square	5.92 (P = .052)
Normal Theory Weighted Least Squares Chi-Square	5.82 (P = .054))
Satorra-Bentler Scaled Chi-Square	3.68 (P = .15)
Chi-Square Corrected for Non-Normality	3.75 (P = .15))
Estimated Non-Centrality Parameter (NCP)	1.68
90 Percent Confidence Interval for NCP	(.0; 11.30)
Minimum Fit Function Value	.5020
Population Discrepancy Function Value (F0)	.0056
90 Percent Confidence Interval for F0	(.00; .038)
Root Mean Square Error of Approximation (RMSEA)	.053
90 Percent Confidence Interval for RMSEA	(.0; .14)
P-Value for Test of Close Fit (RMSEA < .05)	.37
Expected Cross-Validation Index (ECVI)	.066
90 Percent Confidence Interval for ECVI	(.06; .098)
ECVI for Independence Model	1.64
Chi-Square for Independence Model with 6 Degrees of Freedom	481.58
Normed Fit Index (NFI)	.99
Non-Normed Fit Index (NNFI)	.99
Parsimony Normed Fit Index (PNFI)	.33
Comparative Fit Index (CFI)	.99
Incremental Fit Index (IFI)	.99
Relative Fit Index (RFI)	.98
Critical N (CN)	750.09
Root Mean Square Residual (RMR)	.050
Standardized RMR	.021
Goodness of Fit Index (GFI)	.99
Adjusted Goodness of Fit Index (AGFI)	.95
Parsimony Goodness of Fit Index (PGFI)	.20

The results of the incremental fit measures in Table 4.29 indicate that, when compared to a baseline model, the revised OCQ measurement model achieved NNFI (.99), CFI (.99), IFI (.99), NFI (.99), RFI (.98) and GFI (.99) which all exceeded a threshold of .90, depicting a good fit (Diamantopoulos & Siguaw, 2000; Hair *et al*., 2010). Therefore, these relative indices seem to portray a moderately positive picture of model fit.

4.5.3.1 The unstandardised lambda-X matrix

Providing validity evidence in favour of the indicators (Diamantopoulos & Siguaw, 2000), as indicated in Table 4.30, all the revised Organizational Commitment Questionnaire manifest variables loaded significantly on the latent variables that they were designed to reflect. In the

Lambda-X matrix; the t-values (highlighted in Table 4.30) appear directly under the standard error estimates in brackets. All the factor loadings t-values are significant at $p < .05$ (Anuwichanont, & Mechinda, 2011; Parasuraman *et al.* 2005). Significant loadings confirm the validity of the indicators (Diamantopoulos & Siguaw, 2000). The factor loadings of the items are generally satisfactorily large (> .50).

Table 4.30

Unstandardised Lambda-X matrix of the revised Organizational Commitment Questionnaire

	OCQ			
	--------	--------	--------	--------	--------
OCQ6		1.01			
		(.08)			
		12.99			
OCQ8		1.25			
		(.08)			
		15.14			
OCQ13		.86			
		(.07)			
		10.92			
OCQ14		1.35			
		(.07)			
		18.08			

An integration of the available evidence on the fit of the revised OCQ measurement model points to a reasonable model fit. The fit statistics in Table 4.29 indicates a generally reasonable fitting model. The model succeeded in achieving a close fit. The standardised RMR value was below .05. The NNFI (.99), CFI (.99), IFI (.99), NFI (.99), RFI (.98) and GFI (.99) indices exceeded .90, depicting a mediocre fit. The AGFI (.95) and the PGF1 (.20) both failed to meet the .90 level.

Table 4.31

Completely standardised factor loading estimates for the revised Organizational Commitment Questionnaire (first-order)

	OCQ
OCQ6	.69
OCQ8	.75
OCQ13	.62
OCQ14	.81

4.5.4 Evaluating the fit of the Perceived Supervisory Support scale measurement model

Confirmatory factor analysis (CFA) was also performed on the items of the Perceived Supervisory scale (PSS). Initial analysis with all ten items established a poor model fit as indicated by a RMSEA of .11. Further inspection of the reliability and EFA statistics resulted in the deletion of items PSS3 and PSS9. The CFA achieved a reasonable fit RMSEA value of .064. Further careful inspection of the theta-delta modification indices resulted in the deletion of items PSS1, PSS3, PSS5 and PSS8. The full spectrum of fit statistics is shown in Table 4.32. A sample RMSEA value of .064 indicates a reasonable fit (Diamantopoulos & Siguaw, 2000). The lower bound of the 90 percent confidence interval for RMSEA (.012; .11) of .012 confirms an acceptable model fit. The results are depicted in Table 4.32.

LISREL 8.80 also explicitly tests the null hypothesis of close fit. Table 4.32 indicates that the null hypothesis of close model fit (RMSEA $\leq$ .05) is rejected at a 5% significance level ($p <$ .05), indicating an acceptable fit. The RMR of .045 and the standardised RMR value of .015 both reflect a positive picture of the model fit.

Table 4.32

Goodness-of- fit statistics of the Revised Perceived Supervisory Support scale measurement model

Goodness of Fit Statistics

Degrees of Freedom	5
Minimum Fit Function Chi-Square	24.74 (P = .000016)
Normal Theory Weighted Least Squares Chi-Square	22.94 (P = .00035)
Satorra-Bentler Scaled Chi-Square	11.58 (P = .041)
Chi-Square Corrected for Non-Normality	15.61 (P = .00081)
Estimated Non-Centrality Parameter (NCP)	6.58
90 Percent Confidence Interval for NCP	(.23; 20.56)
Minimum Fit Function Value	.076
Population Discrepancy Function Value (F0)	.020
90 Percent Confidence Interval for F0	(.00072; .063)
Root Mean Square Error of Approximation (RMSEA)	.064
90 Percent Confidence Interval for RMSEA	(.012; .11)
P-Value for Test of Close Fit (RMSEA < .05)	.27
Expected Cross-Validation Index (ECVI)	.097
90 Percent Confidence Interval for ECVI	(.078; .014)
ECVI for Saturated Model	.093
ECVI for Independence Model	5.85
Chi-Square for Independence Model with 10 Degrees of Freedom	1886.65
Normed Fit Index (NFI)	.99
Non-Normed Fit Index (NNFI)	.99
Parsimony Normed Fit Index (PNFI)	.50
Comparative Fit Index (CFI)	.99
Incremental Fit Index (IFI)	.99
Relative Fit Index (RFI)	.99
Critical N (CN)	423.05
Root Mean Square Residual (RMR)	.045
Standardized RMR	.015
Goodness of Fit Index (GFI)	.97
Adjusted Goodness of Fit Index (AGFI)	.92
Parsimony Goodness of Fit Index (PGFI)	.32

The results of the incremental fit measures in Table 4.32 indicate that, when compared to a baseline model, the PSS measurement model achieved NNFI (.99), CFI (.99), IFI (.99), NFI (.99), RFI (.99) and the GFI (.97) all which exceeded .90 depicting a good fit (Diamantopoulos & Siguaw, 2000; Hair *et al*., 2010). Therefore, these relative indices seem to portray a positive picture of model fit.

4.5.4.1 The unstandardised lambda-X matrix

As indicated in Table 4.33, all the revised PSS scale manifest variables loaded significantly on the latent variables that they were designed to reflect. In the Lambda-X matrix, the t-values (highlighted in Table 4.33) appear directly under the standard error estimates in brackets, are all higher than |1.65| and are significant at $p < .01$ (Anuwichanont, & Mechinda, 2011; Parasuraman *et al.* 2005). Significant loadings confirm the validity of the indicators (Diamantopoulos & Siguaw, 2000).

Table 4.33

Unstandardised Lambda-X matrix of the Revised Perceived Supervisory scale

	PSS

PSS2	1.47
	(.07)
	19.76
PSS4	1.42
	(.06)
	24.19
PSS6	1.59
	(.06)
	28.13
PSS7	1.58
	(.05)
	30.15
PSS10	1.48
	(.06)
	23.67

Table 4.34 gives the completely standardised factor loadings. The factor loadings of the items are generally satisfactorily large (> .50).

Table 4.34

Completely standardised factor loading estimates for the Revised Perceived Supervisory scale (first-order)

	PSS
PSS2	.80
PSS4	.88
PSS6	.90
PSS7	.94
PSS10	.85

An integration of the available evidence on the fit of the revised PSS scale measurement model points to a reasonable model fit. The fit statistics in Table 4.32 indicates a generally reasonable fitting model. The model did succeed in achieving a close fit, and the standardised RMR value was below .05. The NNFI (.99), CFI (.99), IFI (.99), NFI (.99), RFI (.99) GFI (.97), AGFI (.92) indices exceeded .90, painting a positive picture of the model; only the PGF1 (.32) failed to meet the .90 level, depicting a reasonable fit.

4.5.5 Evaluating the fit of the Perceived Organisational Support Scale measurement model

Confirmatory factor analysis (CFA) was also performed on the items of the Perceived Organisational Support (POS) Scale. The measurement model converged in 4 iterations. The full spectrum of fit statistics is shown in Table 4.35. An examination of the goodness-of-fit indices indicates that the model has achieved good model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .035 indicates a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90 percent confidence interval for RMSEA (.0; .065) is around the critical cut-off value of .05, thereby confirming a reasonable to good model fit. Furthermore, Table 4.35 indicates that the null hypothesis of close model fit (RMSEA $\leq$ .05) is not rejected at a 5% significance level ($p < .05$), indicating a good fit. The RMR value of .097 is indicative of poor model fit while the standardised RMR value of .038 indicates a good model fit (< .05) level.

The results of the incremental fit measures in Table 4.35 indicates that, when compared to a baseline model, the POS measurement model achieved NNFI (.99), CFI (.99), IFI (.99), NFI (.98), RFI (.97) and GFI (.97) indices all exceeding .90 threshold, depicting a good fit (Diamantopoulos & Siguaw, 2000; Hair *et al*., 2010). Therefore, these relative indices seem to portray a highly positive picture of model fit.

Table 4.35

Goodness-of- fit statistics of the Revised Perceived Organisational Scale measurement model

Goodness of Fit Statistics

Degrees of Freedom	19
Minimum Fit Function Chi-Square	42.63 (P = .0015)
Normal Theory Weighted Least Squares Chi-Square	41.10 (P = .0023)
Satorra-Bentler Scaled Chi-Square	26.61 (P = .11)
Chi-Square Corrected for Non-Normality	36.79 (P = .0084)
Estimated Non-Centrality Parameter (NCP)	7.61
90 Percent Confidence Interval for NCP	(.0; 25.36)
Minimum Fit Function Value	.13
Population Discrepancy Function Value (F0)	.024
90 Percent Confidence Interval for F0	(.0; .079)
Root Mean Square Error of Approximation (RMSEA)	.035
90 Percent Confidence Interval for RMSEA	(.0; .065)
P-Value for Test of Close Fit (RMSEA < .05)	.77
Expected Cross-Validation Index (ECVI)	.19
90 Percent Confidence Interval for ECVI	(.17; .25)
ECVI for Saturated Model	.23
ECVI for Independence Model	4.06
Chi-Square for Independence Model with 28 Degrees of Freedom	1278.82
Normed Fit Index (NFI)	.98
Non-Normed Fit Index (NNFI)	.99
Parsimony Normed Fit Index (PNFI)	.66
Comparative Fit Index (CFI)	.99
Incremental Fit Index (IFI)	.9
Relative Fit Index (RFI)	.97
Critical N (CN)	434.89
Root Mean Square Residual (RMR)	.097
Standardized RMR	.038
Goodness of Fit Index (GFI)	.97
Adjusted Goodness of Fit Index (AGFI)	.94
Parsimony Goodness of Fit Index (PGFI)	.51

4.5.5.1 The unstandardised lambda-X matrix

Significant indicator loadings provide validity evidence in favour of the indicators (Diamantopoulos & Siguaw, 2000). As indicated in Table 4.36, all the POS manifest variables loaded significantly on the latent variables that they were designed to reflect, all exceeding |1.65| (Anuwichanont, & Mechinda, 2011; Parasuraman et *al.*, 2005). In the Lambda-X matrix, the t-values (highlighted in Table 4.36) appear directly under the standard error estimates in brackets. Significant loadings confirm the validity of the indicators (Diamantopoulos & Siguaw, 2000).

Table 4.36

Unstandardised Lambda-X matrix of the Revised Perceived Organisational Scale

	POS_1	POS_2
	--------	--------
POS1	1.04 (.09) 11.69	- -
POS4	.1.22 (.08) 14.68	- -
POS6	1.24 (.08) 15.49	- -
POS8	1.14 (.09) 12.34	- -
POS2	- -	.1.20 (.09) 12.91
POS3	- -	1.23 (.08) 14.55
POS5	- -	1.28 (.08) 15.46
POS7	- -	1.21 (.09) 13.05

Table 4.37 gives the completely standardised factor loadings. The values shown in the completely standardised solution loading matrix represent the slopes of the regression of the standardised items on the standardised latent culture dimension that the item was designed to represent. Therefore, the completely standardised loadings indicate the average change expressed in standard deviations in the item associated with one standard deviation change in the latent variable. The factor loadings of the items are generally satisfactorily all larger than > .50.

Table 4.37

Completely standardised factor loading estimates for Perceived Organisational Scale (first-order)

	POS_1		POS_2
POS1	.68		
POS4	.78		
POS6	.81		
POS8	.73		- -
POS2			.73
POS3		- -	.74
POS5		- -	.79
POS7			.74

Table 4.38 portrays the correlation between the two latent POS scale dimensions. The correlation falls within reasonable limits, as high values (above .90) may indicate multi-collinearity (Tabachnick & Fidell, 2007). An integration of the available evidence on the fit of the Perceived Organisational Scale measurement model points to a reasonable model fit. The fit statistics in Table 4.35 indicates a generally good fitting model. The model succeeded in achieving a close fit, and the standardised RMR value was below .05, lending further support to a good model fit. The NNFI (.99), CFI (.99), IFI (.99), NFI (.98), RFI (.97). GFI (.97) and AGFI (.94) indices all exceeded .90, further lending evidence of a good fit. Only the PGF1 (.51) failed to meet the .90 cut-off level, but with an acceptable score (Diamantopoulos & Siguaw, 2000). A correlation of .133 was observed between the two dimensions of POS, and was well below .9. The completely standardised factor loadings are also generally acceptable.

Table 4.38

Inter-correlations between latent Perceived Organisational Scale factors

	POS_1	POS_2
POS_1	1.000	
POS_2	.133	1.000

4.5.6 Evaluating the fit of the Turnover Intention Scale measurement model

Confirmatory factor analysis (CFA) was performed on the items of the Turnover Intention Scale. With all four Turnover Intention Scale items included, a RMSEA of .11 was achieved, depicting a poor fit. Further inspection of the theta-delta modification indices resulted in the deletion of item 2. The measurement model converged in 6 iterations. The full spectrum of fit statistics is shown in Table 4.39. An examination of the goodness-of-fit indices indicates that the model has achieved reasonable model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .077 indicates a reasonable fit (Diamantopoulos & Siguaw, 2000). The lower bound of the 90 percent confidence interval for RMSEA (.021; .21) is very low, thereby confirming a reasonable model fit.

Table 4.39

Goodness-of- fit statistics of the Revised Turnover Intention Scale measurement model

Goodness of Fit Statistics

Degrees of Freedom	1
Minimum Fit Function Chi-Square	4.24 (P = .040)
Normal Theory Weighted Least Squares Chi-Square	4.21(P = .040)
Satorra-Bentler Scaled Chi-Square	4.37 (P = .036)
Chi-Square Corrected for Non-Normality	4.37 (P = .036)
Estimated Non-Centrality Parameter (NCP)	3.37
90 Percent Confidence Interval for NCP	(.14; 13.94)
Minimum Fit Function Value	.03
Population Discrepancy Function Value (F0)	.010
90 Percent Confidence Interval for F0	(.00044; .043)
Root Mean Square Error of Approximation (RMSEA)	.077
90 Percent Confidence Interval for RMSEA	(.021; .21)
P-Value for Test of Close Fit (RMSEA < .05)	.12
Expected Cross-Validation Index (ECVI)	.069
90 Percent Confidence Interval for ECVI	(.059; .10)
ECVI for Saturated Model	.062
ECVI for Independence Model	.90
Chi-Square for Independence Model with 6 Degrees of Freedom	284.05
Normed Fit Index (NFI)	.98
Non-Normed Fit Index (NNFI)	.93
Parsimony Normed Fit Index (PNFI)	.16
Comparative Fit Index (CFI)	.99
Incremental Fit Index (IFI)	.99
Relative Fit Index (RFI)	.91
Critical N (CN)	49.88
Root Mean Square Residual (RMR)	.083
Standardized RMR	.024
Goodness of Fit Index (GFI)	.99
Adjusted Goodness of Fit Index (AGFI)	.94
Parsimony Goodness of Fit Index (PGFI)	.099

LISREL 8.80 also explicitly tests the null hypothesis of close fit. Table 4.39 indicates that the null hypothesis of close model fit (RMSEA ≤ .05) is rejected at a 5% significance level (p > .05), indicating a good fit, and both the RMR of .083 and the standardised RMR value of .024 depict a relatively positive fit.

The results of the incremental fit measures in Table 4.39 indicate that, when compared to a baseline model, the Turnover Intention Scale measurement model achieved NNFI (.93), CFI (.99), IFI (.99), NFI (.98), RFI (.91) and GFI (.99) indices, which exceeded .90 threshold depicting a reasonable, fit (Diamantopoulos & Siguaw, 2000; Hair *et al*., 2010). Therefore, these relative indices seem to portray a moderately positive picture of model fit.

4.5.6.1 The unstandardised lambda-X matrix

The unstandardised Lambda-X matrix provides an indication of the validity of the measures through the significance of indicator loadings (Diamantopoulos & Siguaw, 2000). As indicated in Table 4.40, all the Turnover Intention Scale manifest variables loaded significantly on the latent variables that they were designed to reflect, as indicated by the t-values (highlighted in Table 4.40) appearing directly under the standard error estimates in brackets, all exceeding |1.65| (Anuwichanont, & Mechinda, 2011; Parasuraman et *al.*, 2005). Significant loadings confirm the validity of the indicators (Diamantopoulos & Siguaw, 2000).

Table 4.40

Unstandardised Lambda-X matrix of the Revised Turnover Intention Scale

	TI_1	TI_2
	--------	--------
TI1	.95	- -
	(.15)	
	6.45	
TI4	1.95 - -	
	(.21)	
	9.14	
TI3	01.47	
	(.21)	
	9.14	

Table 4.41 gives the completely standardised factor loadings. The factor loadings of the items are generally satisfactorily large (> .50) with the exception of item TI4, which obtained an inadmissible factor loading of 1.05 that is above unity.

Table 4.41

Completely standardised factor loading estimates for the Revised Turnover Intention Scale (first-order)

	TI_1
TI1	.52
TI4	1.05
TI3	.83

An integration of the available evidence on the fit of the Turnover Intention Scale measurement model points to a reasonable model fit. The fit statistics in Table 4.39 indicates a generally reasonable fitting model. The model succeeded in achieving a close fit, with a standardised RMR value that was below .05 (at .024). The NNFI (.93), CFI (.99), IFI (.99) NFI (.98), RFI (.91), GFI (.99) and the AGFI (.94) indices exceeded .90, depicting a reasonable, good fit. Only the PGF1 (.099) failed to meet the .90 level. The completely standardised factor loadings are generally acceptable.

4.6.ASSESSMENT OF UNIVARIATE AND MULTIVARIATE NORMALITY OF THE EMPLOYEE RETENTION STRUCTURAL MODEL COMPOSITE INDICATOR VARIABLE DATA

Maximum likelihood (ML) estimation is the default procedure used to estimate model parameters in the process of fitting a measurement model to continuous data in LISREL 8.8. ML estimation assumes that data follows a multivariate normal distribution. Since the results indicate that the problem of lack of univariate and multivariate normality still had to be addressed, robust maximum likelihood estimation method was used to resolve this problem.

The multivariate normality of the composite item parcels in this study was evaluated via PRELIS. Table 4.42 indicates that the 22 out of the 22 indicator variables, which is 100%,

failed the test of univariate normality ($p < .05$). The Chi-square value for skewness and kurtosis indicates all the indicator variables failed the test of univariate normality ($p < .05$). Furthermore, the null hypothesis that the data follows a multivariate normal distribution also had to be rejected ($x^2 = 1580.221$; $p < .05$). Since the quality of the solution obtained in structural equation modelling is to a large extent dependent on multivariate normality, it was decided to normalise the variables through PRELIS. Table 4.43 indicates that the null hypothesis stating that the data follows a multivariate normal distribution was also rejected ($x^2 = 1580.221$; $p < .05$). PRELIS was subsequently employed to normalise the data.

Table 4.42

Test of univariate normality for continuous variables before normalisation

	Skewness		Kurtosis		Skewness and Kurtosis	
Variable	Z-Score	P-Value	Z-Score	P-Value	Chi-Square	P-Value
ITS1	4.171	0.000	-9.469	0.000	107.054	0.000
ITS2	-0.713	0.476	81.770	0.000	6686.762	0.000
ITS3	0.920	0.358	-17.880	0.000	320.533	0.000
ITS4	4.120	0.000	-9.478	0.000	106.803	0.000
COLL_1	-4.331	0.000	0.376	0.707	18.899	0.000
COLL_2	-2.014	0.044	-3.549	0.000	16.650	0.000
PD_1	9.669	0.000	6.128	0.000	131.044	0.000
PD_2	6.776	0.000	2.184	0.029	50.686	0.000
UA_1	-10.366	0.000	7.080	0.000	157.573	0.000
UA_2	-10.959	0.000	7.322	0.000	173.707	0.000
MASC_1	7.392	0.000	2.863	0.004	62.838	0.000
MASC_2	1.607	0.108	-6.826	0.000	49.175	0.000
LTO_1	-10.280	0.000	7.176	0.000	157.173	0.000
LTO_2	-14.131	0.000	9.822	0.000	296.160	0.000
PSS_1	-3.600	0.000	-5.597	0.000	44.294	0.000
PSS_2	-4.934	0.000	-2.526	0.012	30.729	0.000
POS_1	-2.860	0.004	-1.007	0.314	9.196	0.010
POS_2	0.474	0.636	-3.289	0.001	11.040	0.004
JS_1	-3.496	0.000	-3.177	0.001	22.317	0.000
JS_2	-3.956	0.000	-0.863	0.388	16.398	0.000
OC_2	-5.798	0.000	1.060	0.289	34.746	0.000
OC_1	-4.816	0.000	-1.172	0.241	24.565	0.000

Table 4.43

Test of multivariate normality for continuous variables before normalisation

Skewness			Kurtosis			Skewness and Kurtosis	
Value	Z-Score	P-Value	Value	Z-Score	P-Value	Chi-Square	P-Value
109.012	36.610	0.000	639.540	15.490	0.000	1580.221	0.000

Table 4.44 indicates that the normalisation procedure only partially succeeded in rectifying the univariate normality problem on 6 out of the 22 indicator variables. The p-values of the 6 item parcels increased quite substantially, as can be seen in Table 4.44. The univariate normality null hypothesis had to be rejected for 16 of the 22 item parcels. Normalising the data typically does improve the symmetry and kurtosis of the indicator variable distributions. Chi-square also improved from 1580.221 to 290.743. Table 4.45 indicates that although the normalisation procedure employed using PRELIS succeeded in improving the univariate normality of 6 indicator variables, the null hypothesis of multivariate normality still had to be rejected. Hence, it was decided to use robust maximum likelihood estimation to derive estimates for the freed measurement model parameters. Table 4.45 indicates that Chi square of the normalised data improved but the null hypothesis of multivariate normality (x^2= 290.753, $p < .05$) still had to be rejected.

Table 4.44

Test of univariate normality for continuous variables after normalisation

	Skewness		Kurtosis		Skewness and Kurtosis	
Variable	Z-Score	P-Value	Z-Score	P-Value	Chi-Square	P-Value
ITS1	3.434	0.001	-9.446	0.000	101.016	0.000
ITS2	-0.235	0.814	-13.160	0.000	173.254	0.000
ITS3	0.109	0.913	-9.474	0.000	89.778	0.000
ITS4	2.224	0.026	-12.825	0.000	169.427	0.000
COLL_1	-0.627	0.531	-1.584	0.113	2.901	0.234
COLL_2	-0.350	0.726	-2.130	0.033	4.661	0.097
PD_1	4.510	0.000	-2.517	0.012	26.680	0.000
PD_2	3.520	0.000	-3.213	0.001	22.717	0.000
UA_1	-5.841	0.000	-0.729	0.466	34.653	0.000
UA_2	-7.574	0.000	1.851	0.064	60.787	0.000
MASC_1	3.248	0.001	-3.641	0.000	23.806	0.000
MASC_2	1.159	0.247	-3.976	0.000	17.149	0.000
LTO_1	-2.185	0.029	-2.748	0.006	12.329	0.002
LTO_2	-7.643	0.000	1.974	0.048	62.319	0.000
PSS_1	-0.903	0.367	-4.448	0.000	20.604	0.000
PSS_2	-1.246	0.213	-6.642	0.000	45.663	0.000
POS_1	-0.065	0.948	-1.749	0.080	3.063	0.216
POS_2	-0.300	0.764	-1.965	0.049	3.950	0.139
JS_1	-0.611	0.541	-2.181	0.029	5.128	0.077
JS_2	-0.559	0.576	-2.067	0.039	4.586	0.101
OC_2	-1.874	0.061	-3.528	0.000	15.962	0.000
OC_1	-1.886	0.059	-3.370	0.001	14.911	0.001

Table 4.45

Test of univariate normality for continuous variables after normalisation

Skewness			Kurtosis			Skewness and Kurtosis	
Value	Z-Score	P-Value	Value	Z-Score	P-Value	Chi-Square	P-Value
62.624	14.335	0.000	574.675	9.234	0.000	290.753	0.000

4.7.OVERALL MEASUREMENT MODEL FIT

The operationalisation of the latent variables comprising the individual cultural values-job attitudes-perceived support employee retention structural model as described in paragraph 3.8 implies the measurement model expressed as Equation 3.11.

The LISREL programme, version 8.80 (Jöreskog & Sörbom, 2007) was used to perform a confirmatory factor analysis on the overall measurement model to determine the fit of the model. The robust maximum likelihood estimation method was used to produce the estimates due to the failure of the data to satisfy the multivariate normality assumption. The overall measurement model fit indices are briefly discussed in this section. The fit statistics are shown in Table 4.46.

The Chi-square statistic is the traditional measure for overall model fit in co-variance structure models. It provides a test of perfect fit in which the null hypothesis is that the model fits the population data perfectly. A statistically significant chi-square leads to the rejection of the null hypothesis, implying imperfect fit and possible rejection of the model. Thus, the null hypothesis tested by the chi-square test is **H0: $\Sigma = \Sigma(\theta)$** (Diamantopoulos & Siguaw, 2000). The p-value associated with the Satorra-Bentler scaled chi-square returned a value of 196.11($p = .00$) which indicates a significant test statistic ($p < .05$). This suggests that there is a discrepancy between the covariance matrix implied by the measurement model and the observed covariance matrix, thus accepting the following exact fit null hypothesis (H_{01a}):

$$H_{01\,a}: \text{RMSEA} = 0$$

$$H_{a1a}: \text{RMSEA} > 0$$

The root mean square error of approximation (RMSEA) value is .048 which indicates good model fit (Diamantopoulos & Siguaw, 2000). LISREL 8.80 also provides a 90% confidence

interval for the RMSEA (.036; .060), indicating that the hypothesis of close fit is not rejected, since the interval includes the RMSEA value. The LISREL programme also tests the null hypothesis of close fit, (H_{01b} RMSEA $\leq$ .05) by calculating the conditional probability of observing the sample value of .048 under the assumption that H_0: RMSEA < .05 is true in the population. A probability value of 0.57 is returned in Table 4.46. The close fit null hypothesis (depicted below) is therefore not rejected.

H_{a1b}: RMSEA $\leq$ .05

H_{a1b}: RMSEA > .05

Table 4.46

Goodness-of-fit statistics for the overall measurement model

Fit Index	Value
Degrees of Freedom	116
Minimum Fit Function Chi-Square	206.40(P= .00)
Normal Theory Weighted Least Squares Chi-Square	213.66(P= .00)
Satorra-Bentler Scaled Chi-Square	196.11(P= .00)
Chi-Square Corrected for Non-Normality	242.42 (P = .00)
Estimated Non-Centrality Parameter (NCP)	80.11
90 Percent Confidence Interval for NCP	(45.34; 122.77)
Minimum Fit Function Value	.70
Population Discrepancy Function Value (F0)	.27
90 Percent Confidence Interval for F0	(.15; .42)
Root Mean Square Error of Approximation (RMSEA)	.048
90 Percent Confidence Interval for RMSEA	(.036; .060)
P-Value for Test of Close Fit (RMSEA < .05)	.57
Expected Cross-Validation Index (ECVI)	1.17
90 Percent Confidence Interval for ECVI	(1.05; 1.32)
ECVI for Saturated Model	1.29
ECVI for Independence Model	9.45
Chi-Square for Independence Model with 171 Degrees of Freedom	2741.30
Independence AIC	2779.30
Normed Fit Index (NFI)	.93
Non-Normed Fit Index (NNFI)	.95
Parsimony Normed Fit Index (PNFI)	.63
Comparative Fit Index (CFI)	.97
Incremental Fit Index (IFI)	.97
Relative Fit Index (RFI)	.94
Critical N (CN)	232.38
Root Mean Square Residual (RMR)	.081
Standardized RMR	.047
Goodness of Fit Index (GFI)	.93
Adjusted Goodness of Fit Index (AGFI)	.88
Parsimony Goodness of Fit Index (PGFI)	.57

The root mean squared residual (RMR) value is marginally above .05 and the standardised RMR value is below .05 are indicative of a good fit (Diamantopoulos & Siguaw, 2000). In this

case the values of the RMR and standardised RMR were .081 and .047 respectively. These values are indicative of good measurement model fit.

The absolute fit indices indicated that the covariances predicted from the parameter estimates reproduce the sample covariances (Diamantopoulos & Siguaw, 2000). The value of the GFI = .93 indicates a good model fit while the AGFI = .88 marginally misses an acceptable cut-off threshold of .90. Also, the PGFI value of .57 is within a reasonable range since acceptable values for the PGFI are much lower, within the .50 region (Mulaik, James, Van Alstine, Bennet, & Stilwell, 1989). The relative fit indices displayed in Table 4.46 indicate that the NFI = .93, NNFI = .95, CFI = .97, RFI = .94 and IFI = .97 all generally indicate acceptable fit of the model over the independence model as acceptable values are above .90 (Hair *et al*., 2010).

The critical N (CN) statistic shows a value of CN = 232.38 which is above the generally suggested minimum threshold of 200 for structural equation modelling studies (Diamantopoulos & Siguaw, 2000), further supporting a good fit of the model. Overall, the fit indices seem to support a good measurement model fit.

4.7.1 The unstandardised Lambda-X matrix for the overall measurement model

An examination of the statistical significance of the slope of the regression of the observed variables of the overall measurement model indicates that all but two measurement model item parcels load significantly on the latent variables that they were designed to reflect. All twenty one indicators/item parcels't-values obtained for the interaction term are considerably and substantially higher than 1.65 (Anuwichanont, & Mechinda, 2011; Parasuraman et *al.*, 2005), ranging from 5.04 to 22.98, as indicated in table 4.47. Since Diamantopoulos and Siguaw (2000) advised against overly depending on the unstandardised Lambda-X estimates, the completely standardised factor loadings were also studied and discussed.

Table 4.47

The Unstandardised lambda-X matrix for the overall measurement model

	COLLECT	POWER	MASCU	LTO	OCQ	JS	
COLL_1	1.24 (.14) 8.60	- -	- -	- -	- -	- -	
COLL_2	0.88 (.12) 7.30	- -	- -	- -	- -	- -	
PD_1	- -	1.01 (.14) 7.48	- -	- -	- -	- -	- -
PD_2	- -	.60 (.10) 6.10	- -	- -	- -	- -	- -
MAS_1	- -	- -	- -	1.31 (.23) 5.64	- -	- -	- -
MAS_2	- -	- -	- -	.85 (.17) 5.04	- -	- -	- -
LTO_1	- -	- -	- -	- -	.46 (.06) 7.68	- -	- -
LTO_2	- -	- -	- -	- -	- -	.44 (.06) 7.87	- -
OCQ_1	- -	- -	- -	- -	- -	- -	1.14 (.06) 18.40
OCQ_2	- -	- -	- -	- -	- -	- -	1.03 (.08) 13.65
JS_WORK	- -	- -	- -	- -	- -	- -	- -
JS_COND	- -	- -	- -	- -	- -	- -	- -

LAMBDA-X. matrix...continued

	UA	PSS	POS	ITS
UA_1	.50 (.04) 11.75	- -	- -	- -
UA_2	.38 (.04) 8.79	- -	- -	- -
PSS_1	- -	1.47 (.07)	- -	- -

		20.55			
PSS_2	--	1.55	--	--	--
		(.07)			
		22.98			
POS	--		.60		--
			(.17)		--
		--	9.29		
POS	--		.77		--
			(.09)		
			11.67		
ITS1	--	--	--		1.24
					(.11)
					11.31
ITS3	--	--	--		.84
					(.12)
					6.81
ITS4	--	--	--		1.57
					(.10)
					15.07

4.7.2 The completely standardised factor loading matrix

The values shown in the completely standardised solution factor loading matrix (see Table 4.48) represent the regression slopes of the regression of the standardised indicator variables on the standardised latent variables. The completely standardised loadings therefore indicate the average change expressed in standard deviations in the indicator variable associated with one standard deviation change in the latent variable (Diamantopoulos & Siguaw, 2000). The standardised factor loadings appear to be satisfactorily large, with the exception of MASC_1, the first item parcel for *Masculinity* which obtained an inadmissible value that exceeds unity. The item parcels MASC_2 (.26) and POS_2 (.24) for *Perceived organisational support scale* and item ITS3 (.47) for *Turnover intentions* were low in comparison with the other completely standardized item parcel values which were generally above .5. This to some degree, erodes confidence in the operationalisation.

Table 4.48

Completely standardised Lambda-X matrix for the items and item parcels

	COLLECT	POWER	MASCU	LTO	OCQ	JS
COLL_1	.91					
COLL_2	.83					
PD_1		.74				
PD_2		.86				
MAS_1			2.41[5]			
MAS_2			.26			
LTO_1				.53		
LTO_2				.65		
OCQ_1					.85	
OCQ_2					.74	
JS_WORK						.73
JS_COND						.78

	UA	PSS	POS	ITS
UA_1	.50			
UA_2	.73			
PSS_1		.92		
PSS_2		.95		
POS_1			.51	
POS_2			.24	
ITS1				67
ITS3				.47
ITS4				.84

4.7.3 The theta-delta matrix

The theta-delta matrix represents the covariances between error terms in measurement δi, reflecting the measurement error in indicators for the exogenous variables (Diamantopoulos, 1994). The total variance in the indicator variable could be decomposed into; 1) variance due to discrepancy in the latent variable the indicator variable was meant to reflect (ξj), and 2) variance due to discrepancy in other systematic latent effects the indicator variable was not designed to reflect and random error. The latter are reflected in the δi terms. The measurement error terms δi do not differentiate between systematic and random sources of error or non-relevance variance. The square of the completely standardised factor loadings λ could be

[5] Jöreskog (1999), the author of LISREL programme that is used in this current study for main data analysis, reckons that contrary to many researchers' beliefs, there is nothing wrong with obtaining a completely standardised solution that is above one/exceeds unity. Further information on this is available at: **http://www.ssicentral.com/lisrel/techdocs/HowLargeCanaStandardizedCoefficientbe.pdf**

interpreted as the proportion of systematic-relevant indicator variable variance which corresponds to the squared multiple correlations for X-variables in Table 4.50. The completely standardised theta-delta (θ_δ) shown in Table 4.49 reflects the proportion of non-relevant item parcel variance.

Table 4.49

Completely standardised theta-delta matrix

COLL_1	COLL_2	PD_1	PD_2	UA_1	UA_2
.59	-.03	.14	.73	.43	.57

MAS_1	MAS_2	LTO_1	LTO_2	OCQ_1	OCQ_2
-4.811	.929	.444	.567	.156	.227

JS_WORK	JS_COND	PSS_1	PSS_2	POS_1	POS_2
.46	.39	.16	.11	.718	.940

ITS1	ITS3	ITS4
.55	.78	.30

4.7.4 Squared multiple correlations for item parcels

The squared multiple correlations (R^2) (see Table 4.50) of the indicators depict the extent to which the measurement model is adequately represented by the observed variables (item parcels) (Byrne, 1998). In other words, the squared multiple correlations show the proportion of variance in an indicator that is explained by the underlying latent variable. A high R^2 value would indicate that variance in the indicator under discussion reflects variance in the latent variable to which it has been linked to a large degree. The rest of the variance not explained by the latent variable can be ascribed to systematic and random measurement error (Diamantopoulos & Siguaw, 2000). The R^2 values range from .00 to 1.00 and also serve as reliability indicators (Bollen as cited in Byrne, 1998, p.104). An examination of the R^2 values shown in Table 4.50 reveals above average correlations, except for variables MAS_2 (Masculinity item parcel), LTO_1 and LTO_2 (both Long-term orientation item parcels), ITS1 and ITS3 (Turnover Intention items) and the indicators of the Perceived Organisational Support (POS_1 and POS_2), were very low.

Table 4.50

Squared Multiple Correlations for X and Y-variables

COLL_1	COLL_2	PD_1	PD_2	UA_1	UA_2
.68	.70	.57	.67	.57	.74

MAS_1	MAS_2	LTO_1	LTO_2	OCQ_1	OCQ_2
1.05	.30	.29	.42	.55	.73

JS_WORK	JS_COND	PSS_1	PSS_2	POS_1	POS_2
.54	.61	.84	.89	.28	.06

ITS1	ITS3	ITS4
.45	.22	.70

4.7.5 Examination of measurement model residuals

Standardised residuals are considered large when they exceed +2.58 or -2.58 (Diamantopoulos & Siguaw, 2000). Large positive residuals indicate that the model underestimates the co-variance between two variables, and negative residual shows that the model overestimates the covariance between variables (Jöreskog & Sörbom, 1993). In the present study, the measurement model standardised residuals comprised 8 large negative and 5 large positive residuals. This indicates that the measurement model did not overestimate the variance in the covariance between the composite indicator variables. Five large positive standardised residuals and 8 large negative standardised residuals indicate 10 out of 172 (7.55%) observed variance and covariance terms in the observed sample covariance matrix being poorly estimated by the derived model parameter estimates. This small percentage indicate good to excellent model fit. An inspection of the variables associated with these standardised residuals reveals no clear specific suggestions for possible model modification.

The five large positive residuals (>2.58) and the eight large residuals (< 2.58) in Table 4.51 indicate thirteen observed covariance terms in the observed sample covariance matric (out of 172 covariance terms) being poorly estimated by the derived model parameter estimates. This would indicate good model fit.

Table 4.51

Measurement model standardised residuals

Standardized Residuals

	ITS1	ITS3	ITS4	COLL_1	COLL_2	PD_1
ITS1	- -					
ITS3	-1.67	- -				
ITS4	- -	4.14	- -			
COLL_1	0.96	-0.79	-0.36	- -		
COLL_2	0.33	0.44	-1.13	- -	- -	
PD_1	-1.19	-0.52	1.26	-0.10	1.07	- -
PD_2	-0.56	0.92	0.10	-0.86	0.72	0.00
UA_1	2.07	2.49	0.64	- -	-0.75	-1.74
UA_2	-1.93	-1.19	-2.24	-0.22	-0.19	1.23
MASC_1	0.83	0.63	-1.00	0.11	0.70	0.91
MASC_2	-0.49	1.26	-1.54	0.84	0.25	-1.44
LTO_1	-1.13	-0.61	-2.55	1.56	1.37	1.88
LTO_2	0.40	4.07	2.14	- -	0.01	-1.30
PSS_1	-0.51	-0.26	-0.61	0.61	-0.02	0.37
PSS_2	-1.27	1.46	1.57	-0.47	-0.48	-1.87
JS_1	-1.12	-0.67	2.45	-0.82	0.01	0.55
JS_2	-2.85	2.22	0.03	0.70	0.91	-0.51
OC_2	-1.85	1.13	- -	-0.72	0.18	2.05
OC_1	-0.66	2.38	1.57	0.94	-0.15	-1.33

Standardized Residuals

	PD_2	UA_1	UA_2	MASC_1	MASC_2	LTO_1
PD_2	- -					
UA_1	-0.33	- -				
UA_2	-0.42	0.00	0.00			
MASC_1	2.39	1.64	-1.78	- -		
MASC_2	1.91	1.94	-0.22	- -	- -	
LTO_1	0.78	-0.23	1.72	-0.57	0.32	- -
LTO_2	1.46	-0.26	-0.48	1.44	1.59	0.00
PSS_1	-0.88	-3.70	1.58	1.87	0.22	2.58
PSS_2	-1.24	- -	0.74	-1.35	-0.19	1.96
JS_1	-0.34	-3.57	1.92	-0.56	-1.34	2.44
JS_2	-0.25	-0.90	2.89	0.42	0.60	3.36
OC_2	1.67	- -	2.20	-0.28	1.66	0.41
OC_1	0.16	0.52	-2.68	0.56	1.39	-0.78

Standardized Residuals

	LTO_2	PSS_1	PSS_2	JS_1	JS_2	OC_2
LTO_2	0.00					
PSS_1	-1.99	- -				
PSS_2	-3.74	- -	- -			
JS_1	-4.20	0.74	0.93	- -		
JS_2	-2.64	-2.22	- -	0.00	- -	
OC_2	-4.73	-0.56	0.09	-0.89	0.22	- -
OC_1	1.80	-0.75	0.96	-0.32	1.08	- -

Jöreskog and Sörbom (1993) state that all the standardised residuals may be examined collectively in a stem-and-leaf plot and a Q-plot. The stem-and-leaf plot is depicted in Figure 4.1. A good model is characterised by a stem-and-leaf plot in which the residuals are distributed approximately symmetrically around zero. An excess of residuals on the positive or negative side would indicate that the covariance terms are symmetrically under- or overestimated, respectively.

Table: 4.52

Summary Statistics for Standardized Residuals

Smallest Standardized Residual =			-4.73
Median Standardized Residual =			0.00
Largest Standardized Residual =			4.14
Largest negative standardised residuals			
Residual for	PSS_1 and	UA_1	-3.70
Residual for	PSS_2 and	LTO_2	-3.74
Residual for	JS_1 and	UA_1	-3.57
Residual for	JS_1 and	LTO_2	-4.20
Residual for	JS_2 and	ITS1	-2.85
Residual for	JS_2 and	LTO_2	-2.64
Residual for	OC_2 and	LTO_2	-4.73
Residual for	OC_1 and	UA_2	-2.68
Largest positive standardised residuals			
Residual for	ITS4 and	ITS3	4.14
Residual for	LTO_2 and	ITS3	4.07
Residual for	PSS_1 and	LTO_1	2.58
Residual for	JS_2 and	UA_2	2.89
Residual for	JS_2 and	LTO_1	3.36

From the stem-and-leaf plot depicted in Figure 4.1, the distribution of standardised residuals appears only slightly negatively skewed. This indicates that there is a slightly stronger tendency for the model to overestimate the observed covariance terms.

The Q-plot is depicted in Figure 4.2. The Q-plot is interpreted in terms of whether the data points fall on the 45-degree reference line or not. If the points fall on the 45-degree reference line, it would be indicative of a good fit whereas if the data points swivel away from the 45-degree reference line, the model fit is less satisfactory.

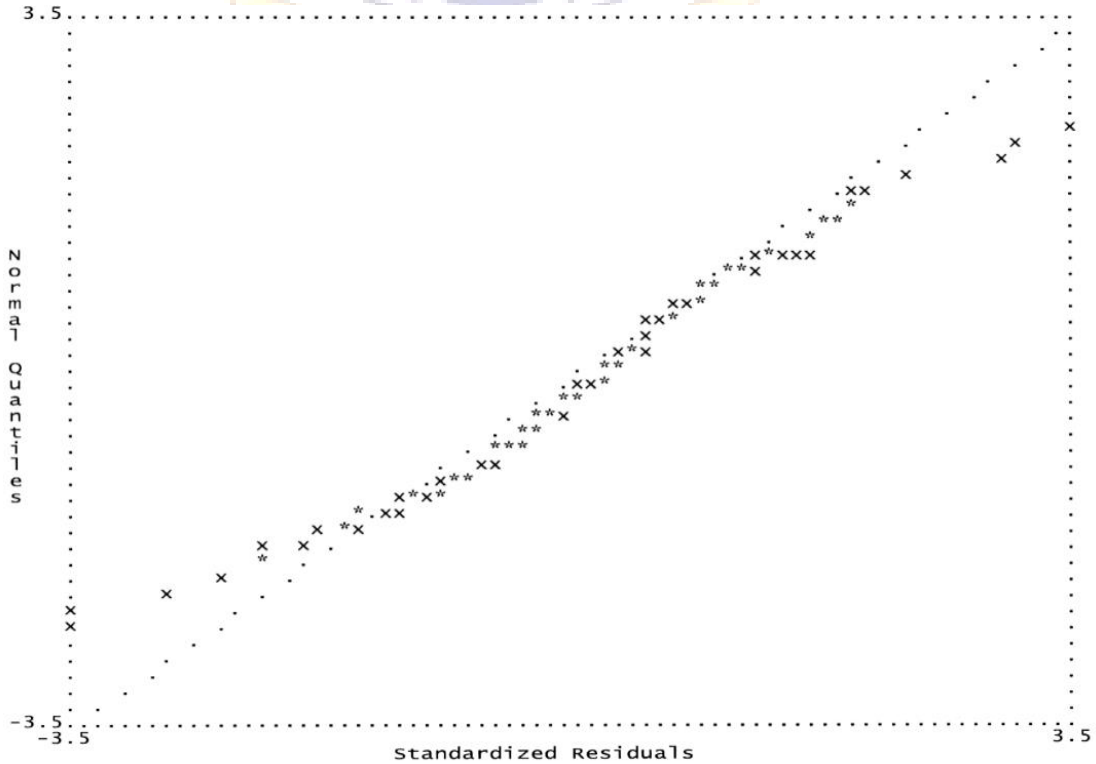
Figure 4.1

Measurement model stemleaf plot

```
- 4|7
 - 4|2
 - 3|776
 - 3|
 - 2|9765
 - 2|220
 - 1|9998775
 - 1|4333332221110
 - 0|999988887777666666555555
 - 0|44333333222222110000000000000000000000000000000000000000
   0|111222233344444
   0|56666667777788899999
   1|00111233444
   1|55666666777899999
   2|001122444
   2|5569
   3|4
   3|
   4|11
```

Figure 4.2

Q-plot



The Q-plot in Figure 4.2 indicates less than perfect model fit because the standardised residuals for the pairs of observed variables tend to deviate from the 45-degree reference line in both the lower and upper region of the X-axis. Subsequently, given the examination of the residuals, it is important to also evaluate the modification indices.

4.7.6 Measurement model modification indices

Modification indices indicate an approximation of the extent to which the chi-square fit statistic decreases when a currently fixed parameter in the model is freed and the model re-estimated (Jöreskog & Sörbom, 1993). According to Brown (2006), the modification indices are analogous to the Chi-square difference (with a single degree of freedom) of nested models. According to the measurement model modification indices, consideration should be given to the possibility of a number of cross-loadings between items and factors other than those they were designed to measure. For example, as indicated in Table 4.53, fit would increase if item ITS1 and ITS4 loaded on JS (Job satisfaction), ITS3 loaded on OC (Organisational commitment), LTO_1 and LTO_2 loaded on JS (Job satisfaction), LTO_2 loaded on ITS (Turnover intention), PSS_2 loaded on JS (Job satisfaction), JS_1 (JS_Conditions) loaded on PSS (Perceived supervisory support and PD_1 and PD_2 both loaded on MASC (Masculinity).

Table 4.53

Modification Indices for LAMBDA

	ITS	JS	OC	PSS	COLL	UA
	--------	--------	--------	--------	--------	--------
ITS1	- -	13.94	4.95	1.91	1.32	0.22
ITS3	- -	5.23	13.54	1.15	0.87	2.23
ITS4	- -	8.28	0.49	0.31	0.27	1.69
COLL_1	1.05	1.75	- -	0.11	- -	0.19
COLL_2	0.60	0.17	0.27	0.08	- -	0.36
PD_1	0.00	0.15	1.05	1.15	5.19	0.01
PD_2	0.00	0.19	1.12	1.29	1.11	0.01
UA_1	5.36	3.90	0.79	0.61	0.03	- -
UA_2	5.64	4.09	0.92	0.67	0.04	- -
MASC_1	1.94	0.10	3.02	0.00	2.66	2.03
MASC_2	1.42	0.08	3.10	0.00	1.08	2.57
LTO_1	6.06	11.10	1.11	6.08	2.30	0.20
LTO_2	7.16	11.25	1.50	5.68	2.18	2.73
PSS_1	0.54	- -	1.99	- -	1.24	0.12
PSS_2	0.41	10.44	1.44	- -	1.23	0.11
JS_1	1.65	- -	3.12	73.77	1.43	1.34

JS_2	0.92	- -	1.51	1.02	1.47	1.26
OC_2	1.21	0.16	- -	0.11	1.60	0.16
OC_1	2.48	0.27	- -	0.12	1.82	0.18

	PD	MASC	LTO
ITS1	1.39	0.94	0.03
ITS3	0.42	0.37	5.20
ITS4	2.18	1.74	1.99
COLL_1	1.95	1.01	0.23
COLL_2	1.48	0.62	0.37
PD_1	- -	17.19	1.65
PD_2	- -	7.62	2.95
UA_1	2.87	3.08	0.00
UA_2	2.90	2.83	0.02
MASC_1	3.29	- -	1.96
MASC_2	3.54	- -	3.08
LTO_1	2.99	0.34	- -
LTO_2	3.69	0.31	- -
PSS_1	0.46	2.90	1.42
PSS_2	0.46	2.89	1.36
JS_1	0.21	0.34	2.01
JS_2	0.20	0.36	1.75
OC_2	2.51	0.30	0.65
OC_1	2.15	0.30	0.79

A close look at the item parcels identified above indicates that, although the modification indices point to the direction of including the items as indicators of the latent variables that they are also loading on, it does not make theoretical sense to do so since the parcels would be made to load on a theoretically different latent variable (see Table 4.53). Furthermore, the fact that only four additional paths would significantly improve the fit of the model should be interpreted as a positive and favourable comment on the merits of the measurement model.

4.8. DISCRIMINANT VALIDITY

Composite reliabilities ($\boldsymbol{p}_{c}$), which actually reflect the reliability of constructs (Diamantopoulos & Siguaw, 2000) are indicated together with Average Variance Extracted (AVE) ($\boldsymbol{p}_{v}$) for each latent variable in Table 4.54. The AVE values indicate the average proportion of variance in the indicator variables accounted for by the latent variable that the indicator variables were designed to represent (Diamantopoulos & Siguaw, 2000). Reliability statistics indicate that all $\boldsymbol{p}_{c}$ values denoting construct validities reached or exceeded .60, a cut-off score for acceptable construct reliability, whereas 9 out of 10 AVE values exceeded the cut-off score of .50, except

the value associated with MASC (Masculinity), which achieved .45. On the basis of this observation, it could be concluded that operationalisation of the constructs was successful.

A method for assessing the discriminant validity of two or more factors proposed by Farrell (2010), which involves comparing AVE of each construct with the shared variance between the constructs, was used. If the AVE for each construct is greater than its shared variance with any other construct, discriminant validity is supported. In this case, this condition was met for all variables (see Table 4.54) which was interpreted to indicate that all the latent variables show discriminant validity.

4.9. DECISION ON THE SUCCESS OF THE OPERATIONALISATION

The measurement model showed reasonable fit. Nineteen out of nineteen of the indicator variables, i.e. 100%, loaded statistically significantly ($p < .05$) on the latent variables they were tasked to reflect, all of them returning t-values that are greater than |1.65|. Although the first item parcel for *Masculinity* (MAS_1) loaded significantly, this item parcel had an inadmissibly high value that exceed unity in the completely standardised solution matrix. The item parcels MAS_2 (.26) for *Masculinity* and POS_2 for *Perceived organisational support* (.24) and item ITS3 (.47) for *Turnover Intention* were low in comparison with the other completely standardised item parcel values which were generally above .5. The solution returned no insignificant loadings. The squared multiple correlations (R^2) of the *Masculinity* item parcel (MAS_2) and the two indicators of *Long-term orientation* (LTO_1 and LTO_2), the two items parcels of *Perceived organisational support* (POS_1 and POS_2) and the two items for *Turnover Intention* (ITS1 and ITS3) were also very low. The measurement model residuals indicate that the measurement model tends to slightly overestimate the variance in the covariance between the composite indicator variables.

The modification indices suggested that the first and the second items of *Power distance* (PD_1 and PD_2) both loaded on *Masculinity* culture dimension; both items of *Long-term orientation* (LTO_1 and LTO_2) loaded on *Job satisfaction*; second item of *Long-term orientation* (LTO_2) loaded on *Turnover intention*; second item parcel of *Perceived Supervisory support* (PSS_2) loaded on *Job satisfaction*; first item parcel of *Job satisfaction* (JS_1) loaded on

Perceived supervisory support; ITS1 and ITS4, both the items of *Turnover intentions* loaded on *Job satisfaction* and ITS3, the item of *Turnover intention* loaded on *Organisational commitment.*

Table 4.54

Inter-correlations between latent dimensions, average variance extracted (AVE), Composite Reliability (p_c) and shared variance estimates (Squared correlations)

Variable	COL	PD	UA	MASC	LTO	PSS	JS	OC	ITS	POS
COL	**.65(.70)**	.00	.02	.00	.02	.05	.02	.01	.03	.09
PD	-.02	**.60(.66)**	.04	.04	.00	.01	.01	.02	.00	.06
UA	.13	-.21	**.54(.65)**	.00	.08	.00	.00	,03	.01	.14
MASC	.03	.19	-.05	**.45 (.62)**	.01	.01	.00	.01	.00	.12
LTO	.14	-.03	.28	.08	**.56 (.61)**	.01	.02	.04	.01	.04
PSS	.22	.10	.01	.10	.08	**.55 (.60)**	.31	.12	.08	.02
JS	.15	.08	.05	-.03	.13	.56	**.50 (.62)**	.31	.15	.11
OC	.24	.04	.18	.10	.21	.34	.56	**.60 (.67)**	.18	.16
ITS	-.18	-.04	-.09	.02	-.11	-.29	-.39	-.43	**.51 (.60)**	**.04**
POS	-.30	.25	.38	.35	-.22	-.17	-.33	.40	-.21	**.55 (.64)**

Note: N = 325; Correlations are below the diagonal; squared correlations are above the diagonal and average variance extracted (AVE) estimates and composite reliability (in brackets) are presented on the diagonal (in bold). Col, Collectivism; PDL, power distance; UA, uncertainty avoidance; MASC, Masculinity; LTO, Long-term orientation; PSS, Perceived supervisory support; JS, Job satisfaction; OC, Organisational commitment; TI, Turnover intentions. Desirable composite reliability ≥ .6; Desirable AVE ≥ .5.

Regarding discriminant validity, Farrell's (2010) method of comparing AVE of each construct with the shared variance between the constructs indicated that all the latent variables showed discriminant validity, as indicated in Table 4.54. Also, composite reliabilities in Table 4.54 on the diagonal in brackets indicated that the composite reliabilities of all ten variables exceeded .60, a threshold suggested by Diamantopoulos and Siguaw (2000). Further support of reliability was observed in the values of average variance extracted (AVE), where nine out of ten variables, i.e. 90% of the values exceeded the .50 value suggested by Diamantopoulos and Siguaw (2000), except one value associated with Masculinity. It is therefore concluded that the

operationalisation of the latent variables comprising the measurement model was generally successful. Therefore, it will be possible to derive an unambiguous verdict on the fit of the structural model from the fit of the comprehensive LISREL model.

4.10. COMPREHENSIVE LISREL MODEL FIT

The individual culture-work attitudes-perceived support-turnover intention structural model was expressed in chapter 3 both as a model and an equation. The structural model describes the relationships between and amongst the latent variables. When assessing the structural model, the focus is on the hypothesised relationships between the exogenous and endogenous variables with the goal of ascertaining the significance and magnitude of the proposed relationships. To determine whether the obtained path coefficient estimates may be regarded as credible estimates, the fit of the comprehensive LISREL model first needs to be determined. If the comprehensive LISREL is able to reproduce the observed covariance matrix to such a degree of accuracy that H_{02} cannot be rejected, and given that the measurement model close fit null hypothesis **(H_{01b})** could not be rejected, the interpretation of the structural model parameter estimates would be warranted. Strictly speaking, this conclusion is, only warranted if it can be shown that the fit of the structural model is acceptable. The details pertaining to the purposes of the various fit indices have been discussed in Chapter 3. The comprehensive model fit indices are presented Table 4.55.

The LISREL program version 8.80 (Jöreskog & Sörbom, 2007) was used to determine the fit of the comprehensive model. The robust maximum likelihood estimation method was used to produce the estimates. An admissible solution of parameter estimation was reached after 36 iterations. Some of the indices provided by the LISREL programme are presented in Table 4.55. The path diagram of the fitted comprehensive LISREL model is depicted in Figure 4.3. The p-value associated with the Satorra-Bentler Scaled $\chi 2$ value in 245.25 ($p = .00$) indicates a significant test statistic ($p < .05$). This implies that the comprehensive model is not able to produce the observed covariance matrix (Kelloway, 1998) to a degree that can be explained in terms of the sampling error only. The exact fit null hypothesis H_{02a} is therefore rejected.

Table 4.55

Goodness of Fit Statistics for the structural model

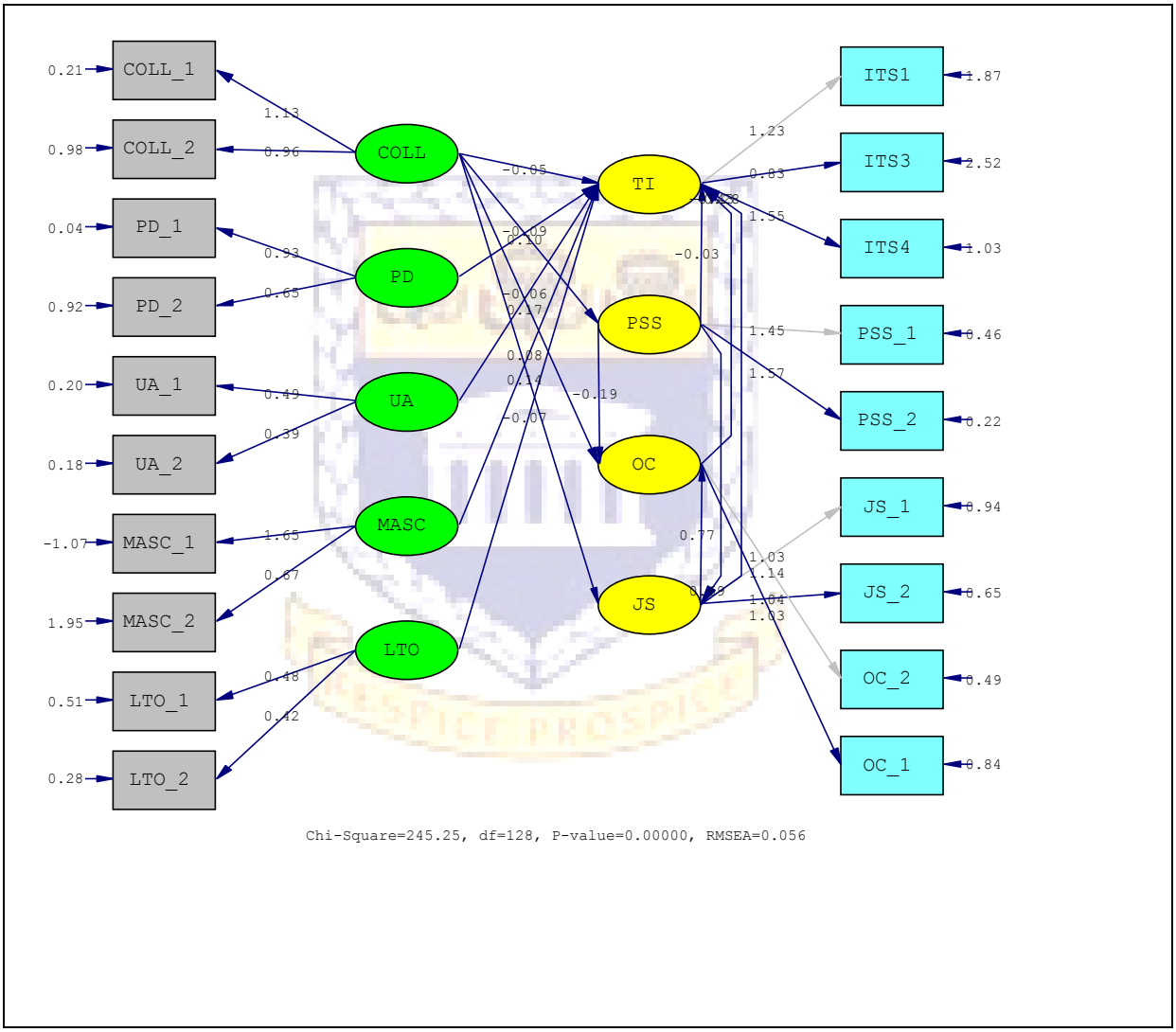
Degrees of Freedom	128
Minimum Fit Function Chi-Square	253.61 (P = .00)
Normal Theory Weighted Least Squares Chi-Square	262.96 (P = .00)
Satorra-Bentler Scaled Chi-Square	245.25 (P = .00)
Chi-Square Corrected for Non-Normality	342.75 (P = .00)
Estimated Non-Centrality Parameter (NCP)	117.25
90 Percent Confidence Interval for NCP	(76.82; 165.49)
Minimum Fit Function Value	.86
Population Discrepancy Function Value (F0)	.40
90 Percent Confidence Interval for F0	(.26; .56)
Root Mean Square Error of Approximation (RMSEA)	.056
90 Percent Confidence Interval for RMSEA	(.045; .066)
P-Value for Test of Close Fit (RMSEA < .05)	.18
Expected Cross-Validation Index (ECVI)	1.26
90 Percent Confidence Interval for ECVI	(1.12; 1.42)
ECVI for Saturated Model	1.29
ECVI for Independence Model	9.45
Chi-Square for Independence Model with 171 Degrees of Freedom	2741.30
Independence AIC	2779.30
Model AIC	369.25
Saturated AIC	342.000
Independence CAIC	2868.35
Model CAIC	659.84
Saturated CAIC	1270.53
Normed Fit Index (NFI)	.91
Non-Normed Fit Index (NNFI)	.94
Parsimony Normed Fit Index (PNFI)	.68
Comparative Fit Index (CFI)	.95
Incremental Fit Index (IFI)	.96
Relative Fit Index (RFI)	.88
Critical N (CN)	202.55
Root Mean Square Residual (RMR)	.10
Standardized RMR	.05
Goodness of Fit Index (GFI)	.91
Adjusted Goodness of Fit Index (AGFI)	.87
Parsimony Goodness of Fit Index (PGFI)	.62

The sample RMSEA estimate is .056, which is indicative of a reasonable fit model. The LISREL program also tests the null hypothesis of close fit H_{02b}. The conditional probability of observing the sample RMSEA estimate under H_{02b} is .18. This indicates that the comprehensive model shows close fit in the parameter is a permissible position. The value of the standardised RMR is .050 which marginally misses the good fit category marginally, as acceptable values should be lower than .05. This value seems acceptable since it is equal to the .05 cut-off and to confirm the model's fit.

Generally, the goodness-of-fit index (GFI) is recommended as the most reliable measure of absolute fit (Diamantopoulos & Siguaw, 2000). In this case, the value of the GFI (.91) indicates a good fit (Diamantopoulos & Siguaw, 2000).

Figure 4.3.

The fitted individual culture-work-related attitudes-perceived support turnover intention comprehensive model



Note: Col, collectivism; PDL, power distance; UA, uncertainty avoidance; MASC, Masculinity; LTO, Long-term orientation; PSS, Perceived supervisory support; JS, Job satisfaction; OC, Organisational commitment; TI, Turnover intentions.

The relative fit indices show how much better the model fits compared to a baseline model, usually the independence model (Diamantopoulos & Siguaw, 2000). In this case the NFI (.91),

NNFI (.94), CFI (.95), IFI (.96) generally indicate a good fit of the model over the independence model as indicated by values above .90, while both the AGFI (.87) and RFI (.88) marginally missed the recommended .9 cut-off (Diamantopoulos & Siguaw, 2000).

4.10.1 Examination of comprehensive model residuals

In the present study, the comprehensive model standardised residuals comprised 4 negative and 9 positive residuals (see Table 4.56). Nine large positive standardised residuals and four large negative standardised residual indicating 13 variance and covariance terms in the observed sample covariance matrix being poorly estimated by the derived comprehensive model parameter estimates were observed. An inspection of the variables associated with these standardised residuals revealed no clear specific suggestions for possible model modification.

Table: 4.56

Summary statistics for structural model standardized residuals

Largest Negative Standardized Residuals			
Residual for	JS_2 and	ITS1	-2.99
Residual for	UA_2 and	ITS1	-2.86
Residual for	UA_2 and	ITS4	-3.46
Residual for	LTO_1 and	ITS4	-3.72
Largest Positive Standardized Residuals			
Residual for	ITS4 and	ITS3	3.93
Residual for	UA_1 and	OC_2	3.95
Residual for	UA_1 and	OC_1	3.79
Residual for	UA_2 and	OC_2	4.36
Residual for	LTO_1 and	JS_1	2.79
Residual for	LTO_1 and	JS_2	3.43
Residual for	LTO_1 and	OC_2	3.07
Residual for	LTO_2 and	OC_2	3.33
Residual for	LTO_2 and	OC_1	4.18

The distribution of the residuals in the stem-and-leaf (in Figure 4.4) is positively skewed, implying that the model is underestimating the observed variance and covariance terms. This suggests that important paths are lacking in the model. An examination of the Q-plot (in Figure 4.5) reveals a clear deviation from the dotted line, thereby providing further evidence that specification of the model is somehow problematic.

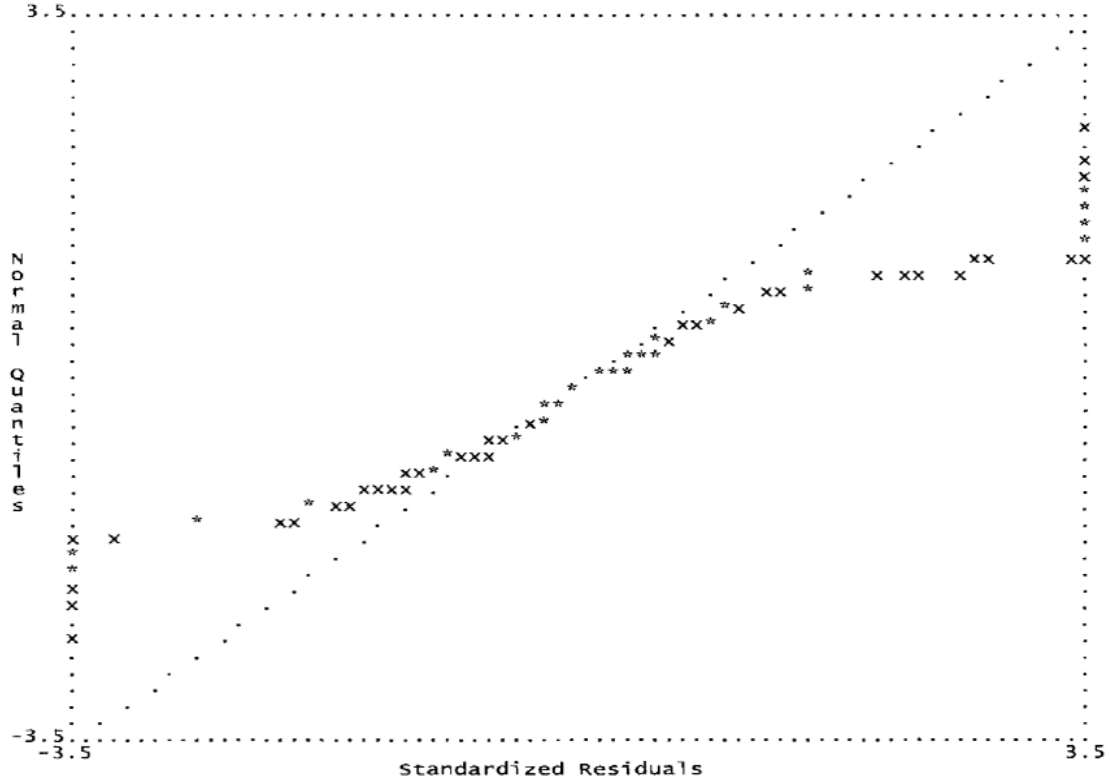
Figure 4.4

Stem-and-leaf plot

```
- 3|75
 - 3|0
 - 2|9
 - 2|3100
 - 1|99855
 - 1|44444443332210
 - 0|999998888887777777766555
 - 0|444444433222211100000000000000000000000000000000000
   0|111122222333444444
   0|55577778888888888999
   1|0000111123334444
   1|5666677788999
   2|0011113344
   2|558
   3|134
   3|899
   4|24
```

Figure 4.5

Q-plot of standardised residuals



4.10.2 Structural model parameter estimates

The purpose of evaluating the structural model is to determine whether the theoretical relationships specified at the conceptualisation stage are substantiated by the data. At this stage the spotlight is on the structural linkages between the various endogenous and exogenous latent variables and between the various endogenous latent variables. According to Diamantopoulos and Siguaw (2000), four issues are of paramount significance in the evaluation of the structural model. Firstly, it is vital to assess the signs of the parameters representing the paths between the latent variables to ascertain the degree of consistence with the nature of the causal effect hypothesised to exist between the latent variables. Secondly, it is important to determine if the parameter estimates are significant ($p < .05$) as indicated by t-values greater than $\left|1.65\right|$ based on one-tailed tests (Anuwichanont, & Mechinda, 2011; Parasuraman, *et al.*, 2005). Thirdly, it is important to assess the magnitudes of the estimated parameters indicating the strength of the hypothesised relationships. Lastly, it is important to evaluate the squared multiple correlations (R^2), which indicate the amount of variance in each endogenous latent variable that is explained by the latent variables linked to it in the hypothesised structural model. The process of evaluating the structural model entails an in-depth analysis of the freed elements of the gamma (γ) and beta (β) matrices.

4.10.3 The gamma matrix

The unstandardised matrix is used to assess the significance of the estimated path coefficients γij, expressing the strength of the influence of ξj (exogenous latent variables) on ηi (endogenous latent variables). Based on one-tailed tests, the gamma parameters are significant if $t > \left|1.65\right|$ ($p < .05$) (Anuwichanont, & Mechinda, 2011; Cao & Zhang, 2013; Parasuraman, *et al.*, 2005). A significant γ estimate implies that the corresponding null hypothesis is rejected in favour of the alternative hypothesis. It is important to note that a significant gamma path coefficient estimate does not imply a causal effect. When using correlational data obtained via an *ex post facto* research design, it is not possible to isolate the empirical system sufficiently to label the relationship among the variables as strictly causal (Cliff, 1983). An *ex post facto* design of this nature, therefore, precludes the drawing of causal inferences from significant path coefficients (Lord, 1973). The gamma matrix is presented in Table 4.57.

Table 4.57

The gamma matrix of path coefficients for the structural model

	COLL	UA	PD	MASC	LTO
	--------	--------	--------	--------	--------
JS	**.14**	- -	- -	- -	- -
	(.07)				
	2.18*				
OC	**.17**	- -	- -	- -	- -
	(.06)				
	2.62*				
PSS	**.10**	- -	- -	- -	- -
	(.07)				
	1.72*				
TI	**-.05**	**-.06**	**-.09**	**.08**	**-.07**
	(.07)	(.11)	(.07)	(.06)	(.12)
	-.63	-.53	-1.40	1.32	-.57

Note: Completely standardised path coefficients in bold; standard error estimates in brackets; t-values ≥ | 1.65 | indicate significant parameter estimates; *p < .05. COLL, Collectivism; UA, Uncertainty avoidance; PD, Power distance; MASC, Masculinity; LTO, Long-term orientation; OCQ, Organisational commitment; JS, Job Satisfaction; PSS, Perceived supervisory support; TI, Turnover intention

4.10.4 The beta matrix

The unstandardised matrix is used to assess the significance of the endogenous latent variables on endogenous latent variables is presented in Table 4.58.

Table 4.58

The beta matrix of path coefficients for the structural model

	JS	OC	TI	PSS
	--------	--------	--------	--------
JS	- -	- -	- -	**.69**
				(.08)
				8.65*
OC	**.77**	- -	- -	**-.15**
	(.15)			(.13)
	5.04 *			-1.40
TI	**-.28**	**-.43**	- -	**-.03**
	(.20)	(.14)		(.13)
	-1.70 *	-3.13*		-.19
PSS	- -	- -	- -	- -

Note: Completely standardised path coefficients in bold; standard error estimates in brackets; t-values ≥ | 1.65 | indicate significant parameter estimates; *p < .05. PSS, Perceived supervisory support; OC, Organisational commitment; JS, Job satisfaction; TI, Turnover intention.

The unstandardized **B** matrix (see Table 4.58) is used to assess the significance of the estimated path coefficients βij, expressing the strength of the influence of ηj on ηi. Based on one-tails tests, the beta parameters are significant if $t > |1.65|$ ($p < .05$) (Anuwichanont, & Mechinda, 2011; Cao & Zhang, 2013; Parasuraman, *et al.*, 2005). A significant β estimate implies that the corresponding null hypothesis is rejected in favour of the alternative hypothesis.

4.10.5 Relationships between latent variables

In this section the results obtained on the relationships postulated in the form of hypotheses in Chapter three are presented. The evaluations of the relationships are based on the t-values displayed in the gamma and beta matrices in Tables 4.57 and 4.58, respectively.

Hypothesis 3: *Collectivism* significantly and positively affects *Job satisfaction*

The t-value of 2.18 ($p < .05$) in the gamma matrix (Table 4.57) indicates that the null hypothesis, that *Collectivism* has no statistically significant effect on *Job satisfaction* (η_1) (hypothesis 3, H_{03}: $\gamma_{11} = 0$), can be rejected in favour of H_{a3} given that the t-value associated with this path is $\geq |1.65|$. A significant ($p < .05$) positive relationship is therefore evident between *Collectivism* and *Job Satisfaction*. H_{03}: $\gamma_{11} = 0$ can be rejected in favour of H_{a3}: $\gamma_{11} > 0$, suggesting that the proposed relationship between these two latent variables was supported. Thus, the relationship postulated between *Collectivism* (ξ_1) and *Job satisfaction* (η_1) in the structural model is corroborated. In addition, the sign associated with this significant γ parameter estimate is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Hypothesis 4: Collectivism significantly and positively affects *Organisational commitment*

The values in the gamma matrix (Table 4.57) indicate that the null hypothesis, that *Collectivism* has no statistically significant effect on *Organisational commitment* (η_2) (hypothesis 4, H_{04}: $\gamma_{21} = 0$), can be rejected in favour of H_{a4} seeing that the t-value (2.62; $p < .05$) associated with this path is greater than |1.65|. A significant positive relationship is therefore evident between *Collectivism* and *Organisational commitment*. H_{04}: $\gamma_{21} = 0$ can be rejected in favour of H_{a4}: γ_{21}

> 0, suggesting that the proposed relationship between these two latent variables was supported. Thus, the relationship postulated between *Collectivism* (ξ_1) and *Organisational commitment* (η_2) in the structural model, is corroborated. In addition, the sign associated with this significant γ parameter estimate is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Hypothesis 5: Collectivism significantly and positively affects *Perceived supervisory support*

Table 4.57 further indicates that the null hypothesis, which states that *Collectivism* (ξ_1) has no statistically significant positive effect on *Perceived supervisory support* (η_3) (hypothesis 5, H_{05}: $\gamma_{31} = 0$), can be rejected in favour of H_{a5} seeing that the t-value associated with this path is greater than |1.65| (t -value = 1.72). A significant ($p < .05$) relationship is therefore evident between *Collectivism* and *Perceived supervisory support*. The causal relationship hypothesised between *Collectivism* (ξ_1) and *Perceived supervisory support* (η_3) is therefore corroborated. In addition, the sign associated with this significant γ parameter estimate is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Hypothesis 6: Collectivism significantly and positively affects *Perceived organisational support*

Hypothesis 6 (H_{06}: $\beta_{41} = 0$: H_{a6}: $\beta_{41} > 0$) could not be tested with SEM because LISREL 8.80 software could not converge the solution with *Perceived organisational support* as part of the model. Linear regression analysis was therefore used to test the effect of *Collectivism* on *Perceived organisational support*. Results, as displayed in Table 4.59 indicate that *Collectivism* explained 12.8 % variance on *Perceived organisational support* ($R^2 = .128$) and the variance explained by the model as a whole was significant (beta = .166; t = 2.970; $p < .01$). On the basis of these results, Hypothesis 6, which posited that *Collectivism* has a significant effect on *Perceived organisational support* was substantiated. In addition, the sign associated with the significant statistics is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Table 4.59

Linear regression results of the effect of Collectivism on Perceived organisational support

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.166[a]	.128	.025	.98249

a. Predictors: (Constant), Coll

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.130	1.806		8.472	.000
	TPOS	.139	.047	.166	2.970	.003

a. Dependent Variable: POS

Hypothesis 7: Collectivism significantly and negatively affects *Turnover intention*

Gamma matrix in Table 4.57 further indicates that the null hypothesis stating that *Collectivism* (ξ_1) has no statistically significant effect on *Turnover intention* (η_5) (hypothesis 7, H_{07}: $\gamma_{51} = 0$), cannot be rejected, given that the t-value of -.63 ($p > .05$) associated with this path is less than |1.65|. An insignificant negative relationship is therefore evident between *Collectivism* and *Turnover intention*. The causal relationship hypothesised between *Collectivism* (ξ_1) and *Turnover intention* (η_5) is therefore not corroborated. The question invariably arises to what extent this is due to the inability to successfully operationalise one of the variables in this hypothesised path.

Hypothesis 8: *Power distance* significantly and negatively affects *Turnover intention*

Table 4.57 further indicates that the null hypothesis, that *Power distance* (ξ_2) has no statistically significant negative effect on *Turnover intention* (η_5) (hypothesis 8, H_{08}: $\gamma_{52} = 0$), cannot be rejected, given that the t-value of -1.40 associated with this path is less than |1.65|. An insignificant ($p > .05$) relationship is therefore evident between *Power distance* and *Turnover*

intention. The causal relationship hypothesised between *Power distance* (ξ_2) and *Turnover intention* (η_5) is therefore not corroborated. The question invariably arises to what extent this is due to the inability to successfully operationalise one of the variables in this hypothesised path.

Hypothesis 9: *Uncertainty avoidance* significantly and negatively affects *Turnover intention*

Table 4. 57 further indicates that the null hypothesis, that *Uncertainty avoidance* (ξ_3) has no statistically significant effect on *Turnover intention* (η_5) (hypothesis 9, H_{09}: $\gamma_{53} = 0$), cannot be rejected, given that the t-value of -.53 associated with this path is less than |1. 65|. An insignificant negative ($p > .05$) relationship is therefore evident between *Uncertainty avoidance* and *Turnover intention*. The causal relationship hypothesised between *Uncertainty avoidance* (ξ_3) and *Turnover intention* (η_5) is therefore not corroborated. The question invariably arises to what extent this is due to the inability to successfully operationalise one of the variables in this hypothesised path.

Hypothesis 10: *Masculinity* significantly and positively affects *Turnover intention*

Table 4. 57 further indicates that the null hypothesis, that *Masculinity* (ξ_4) has no statistically significant effect on *Turnover intention* (η_5) (hypothesis 10, H_{010}: $\gamma_{54} = 0$), cannot be rejected, given that the t-value of 1.32 associated with this path is less than |1.65|. An insignificant ($p > .05$) positive relationship is therefore evident between *Masculinity* and *Turnover intention*. The causal relationship hypothesised between *Masculinity* and *intention* is therefore not corroborated. The question invariably arises to what extent this is due to the inability to successfully operationalise one of the variables in this hypothesised path.

Hypothesis 11: *Long-term orientation* significantly and negatively affects *Turnover intention*

Table 4. 57 further indicates that the null hypothesis, that *Long-term orientation* (ξ_5) has no statistically significant negative effect on *Turnover intention* (η_5) (hypothesis 11, H_{011}: $\gamma_{55} =$

0), cannot be rejected because the statistics (t-value = -.57; p > .05) associated with this relationship is not significant, given that the t-value associated with this path is less than |1.65|. An insignificant (p > .05) relationship is therefore evident between *Long-term orientation* and *Turnover intention*, implying that LTO does not significantly predict *Turnover intention*. The causal relationship hypothesised between *Long-term orientation* (ξ_5) and *Turnover intention* (η_5) is therefore not corroborated. The question invariably arises to what extent this is due to the inability to successfully operationalise one of the variables in this hypothesised path.

Hypothesis 12: *Job satisfaction* significantly and positively affects *Organisational commitment*

The values in the beta matrix (Table 4.58) indicate that the null hypothesis, that *Job satisfaction* (η_1) has no statistically significant positive effect on *Organisational commitment* (η_2) (hypothesis 12, H_{012}: $\beta_{21} = 0$) can be rejected in favour of H_{a12} given that the t-value (5.04; $p < .05$) associated with this path is greater than |1.65|. A significant positive relationship is therefore evident between *Job satisfaction* and *Organisational commitment*. H_{011}: $\beta_{21} = 0$ can be rejected in favour of H_{a12}: $\beta_{21} > 0$, suggesting that the proposed relationship between these two latent variables was supported. Thus, the relationship postulated between *Job satisfaction* (η_1) and *Organisational commitment* (η_2) in the structural model is corroborated. In addition, the sign associated with this significant β parameter estimate is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Hypothesis 13: *Organisational commitment* significantly and negatively affects *Turnover intention*

The values in the beta matrix (Table 4. 58) indicate that the null hypothesis, that *Organisational commitment* (η_2) has no statistically significant effect on *Turnover intention* (η_5) (hypothesis 13, H_{013}: $\beta_{52} = 0$) can be rejected in favour of H_{a13}: $\beta_{52} < 0$, given that the t-value (-3.13; $p < .05$) associated with this path is greater than |1.65|. A significant negative relationship is therefore evident between *Organisational commitment* (η_2) and *Turnover intention* (η_5). H_{013}: $\beta_{52} = 0$ can be rejected in favour of H_{a13}: $\beta_{52} < 0$, suggesting that the proposed relationship between these two latent variables was supported. Thus, the relationship postulated between

Organisational commitment (η_2) and *Turnover intention* (η_5) in the structural model, is corroborated. In addition, the sign associated with this significant β parameter estimate is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Hypothesis 14: *Job satisfaction* significantly and negatively affects *Turnover intention*

The values in the beta matrix (Table 4. 58) indicate that the null hypothesis, that *Job satisfaction* (η_1) has no statistically significant effect on *Turnover intention* (η_5) (hypothesis 14, H_{014}: $\beta_{51} = 0$) can be rejected in favour of H_{a14} given that the t-value (-1.70; $p < .05$) associated with this path is greater than |1.65|. A significant negative relationship is therefore evident between *Job satisfaction* (η_1) and *Turnover intention* (η_5). H_{o14}: $\beta_{51} = 0$ can be rejected in favour of H_{a14}: $\beta_{51} > 0$, suggesting that the proposed relationship between these two latent variables was supported. Thus, the relationship postulated between *Job satisfaction* (η_1) and *Turnover intention* (η_5) in the structural model, is corroborated. In addition, the sign associated with this significant β parameter estimate is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Hypothesis 15: *Perceived supervisory support* significantly and positively affects *Job satisfaction*

The t-values in the beta matrix (Table 4. 58) indicate that the null hypothesis, that *Perceived supervisory support* (η_3) has no statistically significant effect on *Job satisfaction* (η_1) (hypothesis 15, H_{015}: $\beta_{13} = 0$) can be rejected in favour of H_{a15} given that the t-value (8.65; $p < .05$) associated with this path is greater than |1.65|. Thus, the relationship postulated between *Perceived supervisory support* (η_3) and *Job satisfaction* (η_1) in the structural model is corroborated. In addition, the sign associated with this significant β parameter estimate is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Hypothesis 16: *Perceived supervisory support* significantly and positively affects *Organisational commitment*

Table 4. 58 indicates that the null hypothesis, that *Perceived supervisory support* (η_3) has no statistically significant positive effect on *Organisational commitment* (η_2) (hypothesis 16, H_{016}: $\beta_{23} = 0$) can be rejected, given that the t-value (-1.40; $p < .05$) associated with this path is $< |1.65|$. A nonsignificant ($p < .05$) negative relationship is therefore evident between *Perceived supervisory support* and *Organisational commitment*. The causal relationship hypothesised between *Perceived supervisory support* (η_3) and *Organisational commitment* (η_2) is therefore not corroborated. The sign associated with this significant β parameter estimate is also not consistent with the nature of the relationship hypothesised to exist between these latent variables. Therefore, the results indicate that a nonsignificant relationship exists between *Perceived supervisory* support and *Organisational commitment*, and the nature of this relationship as determined by the obtained sign is also counterintuitive (Yung & Cary, 2008) and does not support theory.

Hypothesis 17: *Perceived supervisory support* significantly and positively affects *perceived organisational support*

Hypothesis 17 (H_{017}: $\beta_{43} = 0$: H_{a17}: $\beta_{43} > 0$) could not be tested with SEM because LISREL 8.80 software could not converge the solution with *Perceived organisational support* as part of the model. Linear regression analysis was therefore used to test the effect of *Perceived supervisory* on *Perceived organisational support*. Results, as displayed in Table 4.60 indicate that *Perceived supervisory support* explained 22.6 % variance on *Perceived organisational support* ($R^2 = .226$) and the variance explained by the model as a whole was significant (beta = .475; t = 9.700; $p < .01$). On the basis of these results, Hypothesis 16, which posited that *Perceived supervisory support* has a significant effect on *Perceived organisational support* was substantiated. In addition, the sign associated with the significant statistics is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Table 4.60

Linear regression results of the effect of Perceived supervisory support on Perceived organisational support

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.475[a]	.226	.223	.86522

a. Predictors: (Constant), Perceived Supervisory Support

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.418	.140		17.237	.000
	TPSS	.031	.003	.475	9.700	.000

a. Dependent Variable: POS

Hypothesis 18: *Perceived supervisory support* significantly and negatively affects *Turnover intention*

Table 4. 58 further indicates that the null hypothesis, that *Perceived Supervisory Support* (η_3) has no statistically significant effect on *Turnover intention* (η_5) (hypothesis 18, H_{018}: $\beta_{53} = 0$), cannot be rejected in favour of H_{a18} given that the t-value of -.19 associated with this path is less than |1.65|. A negative insignificant ($p > .05$) relationship is therefore evident between *Perceived Supervisory Support* and *Turnover intention*. The causal relationship hypothesised between *Perceived Supervisory Support* and *Turnover intention* is therefore not corroborated. The question invariably arises to what extent this observed result is due to the inability to successfully operationalise the *Perceived Supervisory Support* and/or T*urnover intention* latent variables.

Hypothesis 19: *Perceived organisational support* significantly and positively affects *Job satisfaction*

Hypothesis 19 (H_{019}: $\beta_{14} = 0$: H_{a19}: $\beta_{14} > 0$) could not be tested with SEM because LISREL 8.80 software could not converge the solution with *Perceived organisational support* as part of the model. Linear regression analysis was therefore used to assess the effect of *Perceived organisational support* on *Job satisfaction*. Results, as displayed in Table 4.61 indicate that *Perceived organisational support* explained 24% variance on *Job satisfaction* ($R^2 = .240$) and the variance explained by the model as a whole was significant (beta = .490; t = 1.095; p < .01). On the basis of these results, Hypothesis 19, which posited that *Perceived organisational support* has a causal effect on *Job satisfaction*, was substantiated. In addition, the sign associated with the significant statistics is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Table 4.61

Linear regression results of the effect of Perceived organisational support on Job satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.490[a]	.240	.237	8.345

a. Predictors: (Constant), TPOS

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	15.301	1.806		8.472	.000
	TPOS	4.767	.472	.490	1.095	.000

a. Dependent Variable: TJS

Hypothesis 20: *Perceived organisational support* significantly and positively affects *Organisational commitment*

Hypothesis 20 (H_{020}: $\beta_{24} = 0$: H_{a20}: $\beta_{24} > 0$) could not be tested with SEM because LISREL 8.80 software could not converge the solution with *Perceived organisational support* as part of the model. Linear regression analysis was therefore used to assess the ability of *Perceived organisational support* to predict *Organisational commitment*. Results, as displayed in Table 4.62 indicate that *Perceived organisational support* explained 24.9% variance on *Organisational commitment* ($R^2 = .249$) and the variance explained by the model as a whole was significant (beta = .499; t = 1.338; p < .01). On the basis of these results, Hypothesis 20, which posited that *Perceived organisational support* has a significant effect on *Organisational commitment* was substantiated. In addition, the sign associated with the significant statistics is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Table 4.62

Linear regression results of the effect of Perceived organisational support on Organisational commitment

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.499[a]	.249	.246	8.878

a. Predictors: (Constant), TPOS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	29.428	1.921		15.316	.000
	TPOS	5.194	.502	.499	1.338	.000

a. Dependent Variable: TOCQ

Hypothesis 21: *Perceived organisational support* significantly and negatively affects *Turnover intention*

Also, Hypothesis 21 (H_{021}: $\beta_{54} = 0$: H_{a21}: $\beta_{54} > 0$) could not be tested with SEM because LISREL 8.80 software could not converge the solution with *Perceived organisational support* as part of the model. Linear regression analysis was therefore used to assess the effect of *Perceived organisational support* to predict *Turnover intention*. Results, as displayed in Table 4.63, indicate that *Perceived organisational support* explained 5.2 % variance on *Turnover intention* ($R^2 = .052$) and the variance explained by the model as a whole was significant (beta = -.228; t = -4.205; p < .01). On the basis of these results, Hypothesis 21, which postulated that *Perceived organisational support* has a significant effect on *Turnover intention* was substantiated. In addition, the sign associated with the significant statistics is consistent with the nature of the relationship hypothesised to exist between these latent variables.

Table 4.63

Linear regression analysis results of the effect of Perceived organisational support on Turnover intention

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.228[a]	.052	.049	5.099

a. Predictors: (Constant), TPOS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	17.020	1.103		15.424	.000
	TPOS	-1.213	.289	-.228	-4.205	.000

a. Dependent Variable: Turnover intention

Hypothesis 22: *Job satisfaction* mediates the effect of *Collectivism* on *Turnover intention*

Data analysis provided support for hypothesis 3, *i.e.* the significant effect of *Collectivism* on *Job satisfaction* (γ_{11} = .14; t = 2.18; p < .05) and also provided support for hypothesis 14, the significant effect of *Job satisfaction* on *Turnover intention* (β_{51} = -.28; t = -1.70; p < .05). The direct effect of *Collectivism* on *Turnover intention* was not corroborated (t < |1.65|; p > .05). The rejection of the direct effect of an independent variable on a dependent variable when the effect of an independent variable on a mediation variable, and the effect of a mediation variable on a dependent variable are substantiated, corroborates full mediation (Zhao, *et al.,* 2005). Furthermore, LISREL unstandardized indirect effect of *Collectivism* on *Turnover intention* is indicated to be significant (t = -3.49) (refer to Table 4.67). Therefore, the mediating effect of *Job satisfaction* on the effect of Collectivism on *Turnover intention* is substantiated.

Hypothesis 23: *Organisational commitment* mediates the effect of *Collectivism* on *Turnover intention*

The significant effect of *Collectivism* on *organisational commitment* (γ_{21} = .17; t = 2.62; p < .05), *i.e.* hypothesis 4, and the significant effect of *Organisational commitment* on *Turnover intention* (β_{52} = -.43; t = -3.13; p < .05) *i.e.* hypothesis 13, were both substantiated. The direct effect of Collectivism on *Turnover intention* was not corroborated (t < |1.65|; p > .05). The rejection of the direct effect of an independent variable on a dependent variable when the effect of an independent variable on a mediation variable, and the effect of a mediation variable on a dependent variable are substantiated, corroborates full mediation (Zhao *et al.,* 2005). Furthermore, LISREL unstandardized indirect effect of Collectivism on *Turnover intention* is significant (t = -3.49) (refer to Table 4.67). Therefore, the mediating effect of *Organisational commitment* on the effect of Collectivism on *Turnover intention* is substantiated.

Hypothesis 24: *Organisational commitment* mediates the effect of *Job satisfaction* on *Turnover intention*

The significant effect of *Job satisfaction* on *Organisational commitment, i.e.* hypothesis 12 (β_{21} = .77; t = 5.04; p < .05) and the significant effect of *Organisational commitment* on *Turnover intention* (β_{52} = -.43; t = -3.13; p < .05), *i.e.* Hypothesis 13, were both supported. The direct

effect of *Job satisfaction* on *Turnover intention* was also substantiated (β_{53} = -.28; t = -1.70; p < .05). The corroboration of the direct effect of an independent variable on a dependent variable, the effect of an independent variable on a mediation variable and the effect of a mediation variable on a dependent variable corroborate partial mediation (Zhao *et al.*, 2005). Furthermore, LISREL unstandardized indirect effect of *Job satisfaction* on *Turnover intention* is indicated to be significant (t = -2.92) (refer to Table 4.68). Therefore, the mediating effect of *Organisational commitment* on the effect of *Job satisfaction* on *Turnover intention* is partially substantiated.

Hypothesis 25: *Job satisfaction* mediates the effect of *Perceived supervisory support* on *Turnover intention*

The significant effect of *Perceived supervisory support* on *Job satisfaction, i.e.,* Hypothesis 15 was corroborated (β_{15} = .69; t = 8.65; p < .05) and the significant effect of *Job satisfaction* on *Turnover intention, i.e.* Hypothesis 14, was also corroborated (β_{51} = -.28; t = -1.70; p < .05). The direct effect of *Perceived supervisory support* on *Turnover intention, i.e.* Hypothesis 18 was not substantiated (β_{53} = -.03; t = -.19; p >.05). The rejection of the direct effect of an independent variable on a dependent variable when the effect of an independent variable on a mediation variable, and the effect of a mediation variable on a dependent variable are substantiated, corroborates full mediation (Zhao *et al.*, 2005). Furthermore, LISREL unstandardized indirect effect of *Perceived supervisory support* on *Turnover intention* was indicated as significant (t = -2.80) (refer to Table 4.68). Therefore, the full mediating effect of *Job satisfaction* on the effect of *Perceived supervisory support* on *Turnover intention* is substantiated.

Hypothesis 26: *Perceived organisational support* mediates the effect of *Perceived Supervisory support* on *Turnover intention*

Hypothesis 26 could not be tested with SEM because LISREL 8.80 software could not converge the solution with *Perceived Organisational support* as part of the model. Therefore, linear regression analysis was performed to assess the mediating effect of *Perceived organisational support* on the relationship between *Perceived supervisory support* and

Turnover intention, in accordance with Baron and Kenny's (1986) four step mediation model. Linear regression model in Table 4.64 confirmed the following results:

- After testing for the significance of the direct effect of *Perceived supervisory support* on *Turnover intention*; the results indicated that the relationship between the two variables is significant ($t = -5.441$; $p < .01$).
- After testing for the significance of the direct effect of *Perceived supervisory support* on *Perceived organisational support*; the results indicated that the relationship between the two variables is significant ($t = 9.700$; $p < .01$).
- After testing for the significance of the direct effect of *Perceived organisational support* on *Turnover intention*; the results indicated that the relationship between the two variables is significant (-4.205; $p < .05$).
- Lastly, after testing for the joint effect of both the independent variable, *i.e. Perceived supervisory support* and the mediating variable, *i.e. Perceived organisational support* in a single regression model with the expectation that *Perceived organisational support* will be a stronger predictor of *Turnover intentions* than *Perceived supervisory support*, results indicated that the effect of the mediating variable, *i.e. Perceived organisational support* ($t = -1.392$; $p > .01$) on the dependent variable, *i.e. Turnover intention*, was reduced to being non-significant, lower than that of the independent variable *i.e. Perceived Supervisory support* ($t = -3.891$; $p < .01$).

On the basis of these results, H_{025} regarding the mediation effect of *Perceived organisational support* on the relationship between *Perceived supervisory support* and *Turnover intention* was not supported.

Table 4.64

Linear regression model results for testing mediational effect of Perceived organisational support on the effect of Perceived supervisory support on Turnover intention

Step and variable	Parameter estimate	SE	t
Step 1: DV = Turnover intention			
Perceived supervisor support	-.10	.018	-.5.441**
R^2	.084		
Step 2: DV = Perceived organisational support			
Perceived supervisor support	.031	.003	9.700**
R^2	.226		
Step 3: DV = Turnover intention			
Perceived organisational support	-1.213	.289	-4.205**
R^2	.052		
Step 4: DV = Turnover intention			
Perceived organisational support	-.620	.321	-1.392
Perceived supervisor support	-.081	.021	-3.891**
R^2	.094		

Note. DV = dependent variable. **p < .01

Hypothesis 27: *Perceived supervisory support* mediates the effect of Collectivism on *Turnover intention*

Support for the significant effect of *Collectivism* on *Perceived supervisory support*, *i.e.*, Hypothesis 5, was corroborated (γ_{31} = .10; t = 1.72; p < .05) and support for the significant effect of *Perceived supervisory support* on *Turnover intention*, *i.e.* Hypothesis 18 was not corroborated (β_{53} = -.03; t = -.19; p > .05). The direct effect of *Collectivism* on *Turnover intention*, *i.e.* hypothesis 7, was not substantiated (β_{51} = -.05; t = -.63; p >.05). The rejection of the direct effect of an independent variable on a dependent variable together with the substantiation of the effect of an independent variable on a mediation variable, and the rejection of the effect of a mediation variable on a dependent variable disproves mediation (Little, Card, Bovaird, Preacher & Crandall, 2007; Zhao *et al.*, 2005). Therefore, the mediation effect of *Perceived supervisory support* on the effect of Collectivism on *Turnover intention* is not substantiated.

Hypothesis 28: *Organisational commitment mediates the* effect of *Perceived organisational support* on *Turnover intention*

Hypothesis 28 could not be tested with SEM because LISREL 8.80 software could not converge the solution with *Perceived organisational support* as part of the model. Therefore, linear regression analysis was used to assess the mediating effect of *Organisational commitment* on the relationship between *Perceived organisational support* and *Turnover intention* in accordance with Baron and Kenny's (1986) four step mediation model. The linear regression model in Table 4.65 delivered the following results:

Table 4.65

Linear regression model results for testing mediational effect of Organisational commitment on the effect of Perceived organisational support on Turnover intention

Step and variable	Parameter estimate	SE	t
Step 1: DV = Turnover intention			
Perceived organisational support	-1.213	.289	-4.205**
R^2	.052		
Step 2: DV = Organisational commitment			
Perceived organisational support	5.195	.502	1.338** R^2
	.249		
Step 3: DV = Turnover intention			
Organisational commitment	-.220	.026	-8.548**
R^2	.184		
Step 4: DV = Turnover intention			
Perceived organisational support	-.097	.309	-.313
Organisational commitment	-.215	.030	-7.243**
R^2	.185		

Note. DV = dependent variable. **p < .01

- After testing for the significance of the direct effect of *Perceived organisational support* on *Turnover intention*; the results indicated that the relationship between the two variables is significant (t = -4.205; p < .01).
- After testing for the significance of the direct effect of *Perceived organisational support* on *Organisational commitment*; the results indicated that the relationship between the two variables is significant (t = 1.338; p < .01).

- After testing for the significance of the direct effect of *Organisational commitment* on *Turnover intention*; the results indicated that the relationship between the two variables is significant (-8.458; $p < .05$).
- Lastly, after testing for the joint effect of both the independent variable, *i.e. Perceived organisational support* and the mediating variable, *i.e. Organisational commitment* in a single regression model, with the expectation that *Organisational commitment* will be a stronger predictor of *Turnover intentions* than *Perceived organisational support* (Conchie & Donald, 2009), results indicated that indeed the effect of *Perceived organisational support* ($t = -.313$; $p > .01$) was reduced to non-significance and was lower than that of *Organisational commitment* ($t = -7.243$; $p < .01$).

On the basis of these results, H_{025} regarding the full mediation effect of *Organisational commitment* on the relationship between *Perceived organisational support* and *Turnover intention* is supported.

Hypothesis 29: *Job satisfaction* mediates the effect of *Perceived organisational* support on *Turnover intention*

Table 4.66

Linear regression model results for testing mediational effect of Job satisfaction on the effect of Perceived organisational support on Turnover intention

Step and variable	Parameter estimate	SE	t
Step 1: DV = Turnover intention			
Perceived organisational support	-1.213	.289	-4.205**
R^2	.052		
Step 2: DV = Job satisfaction			
Perceived organisational support	4.767	.472	8.472**
R^2	.240		
Step 3: DV = Turnover intention			
Job satisfaction	-.215	.028	-7.685**
R^2	.155		
Step 4: DV = Turnover intention			
Perceived organisational support	-.427	.313	-.790
Job satisfaction	-.203	.032	-6.310**
R^2	.156		

Note. DV = dependent variable. **p < .01

Hypothesis 29 could also not be tested with SEM because LISREL 8.80 software could not converge the solution with *Perceived Organisational support* as part of the model. Therefore, linear regression analysis was used to assess the mediating effect of *Job satisfaction* on the relationship between *Perceived organisational support* and *Turnover intention* in accordance with Baron and Kenny's (1986) four step mediation model. The linear regression model in Table 4.66 confirmed the following results:

- After testing for the significance of the direct effect of *Perceived organisational support* on *Turnover intention*; the results indicated that the relationship between the two variables is significant ($t = -4.205$; $p < .01$).
- After testing for the significance of the direct effect of *Perceived organisational support* on *Job satisfaction*; the results indicated that the relationship between the two variables is significant ($t = 8.472$; $p < .01$).
- After testing for the significance of the direct effect of *Job satisfaction* on *Turnover intention*; the results indicated that the relationship between the two variables is significant (-7.685; $p < .05$).
- Lastly, after the joint effect of both the independent variable, *Perceived organisational support* and the mediating variable, *Job satisfaction* in a single regression model with the expectation that *Job satisfaction* will be a stronger predictor of *Turnover intentions* than *Perceived organisational support* to confirm mediation, was tested (Conchie & Donald, 2009). Indeed, the results indicated that the effect of *Perceived organisational support* ($t = -.790$; $p > .01$) was reduced to being non-significant, and the effect was lower than that of *Job satisfaction* ($t = -6.310$; $p < .01$).

On the basis of these results, H_{028} regarding the full mediation effect of *Job satisfaction* on the relationship between *Perceived organisational support* and *Turnover intention* is supported.

Table 4.67

Unstandardised Indirect Effect of KSI on Eta

	COLL	PD	UA	MASC	LTO
	--------	--------	--------	--------	
JOBSAT	.07 --	--	--	--	--
	(.05)				
	1.37				
ORGCOM	.14	--	--	--	---
	(.06)				
	2.39*				
TI	-.20	--	--	--	--
	(.06)				
	-3.49*				
PSS	---	--	--	--	--

Note: COLL = Collectivism; PD = *Power distance*; UA = *Uncertainty Avoidance;* MASC = *Masculinity*; LTO = Long-term orientation; JOBSAT = *Job satisfaction*; ORGCOM = *Organisational commitment*; PSS = *Perceived supervisory support*; TI = *Turnover intention*.

Table 4.68

Unstandardised Indirect Effect of Eta on Eta

	JOBSAT	ORGCOM	TI	PSS
	--------	--------	--------	--------
JOBSAT	--	--	--	--
ORGCOM	--	--	--	.53
				(.12)
				4.35*
TI	-.33	--	--	-.34
	(.011)			(.12)
	-2.92*			-2.80*
PSS	--	--	--	--

Note: JOBSAT = *Job satisfaction*; ORGCOM = *Organisational commitment*; PSS = *Perceived supervisory support*; TI = *Turnover intention*.

Tables 4.67 and 4.68 indicate the unstandardized indirect effect of the exogenous independent variables on the endogenous dependent variables and the unstandardized indirect effect of endogenous variables on other endogenous variables, respectively.

4.10.7 Squared multiple correlations for Structural Equations

An examination of the R^2 values displayed in Table 4.69 reveals average correlations for three out of four of the variables, except for PSS (Perceived supervisory support). The low proportion of .02 variance that the model explains in *Perceived supervisory support* is a cause of concern. Nonetheless, this low variance explained by the model in *Perceived supervisory support* is understandable, considering that this variable is modelled to be affected by only one other variable, *i.e.* Collectivism. Nevertheless, future research will have to focus on rectifying this shortcoming. Suggestions in this regard are made in Chapter 5. The R^2 value for *Turnover intention* (TI) was somewhat within acceptable levels.

Table 4.69

Squared Multiple Correlations for Structural Equations

OC	JS	TI	PSS
--------	--------	--------	--------
.50	.52	.50	.01

Note: OC = Organisational commitment; JS = Job satisfaction; TI = Turnover intention; PSS = Perceived supervisory support

4.10.8 The beta and gamma modification indices

The modification indices calculated for gamma are shown in Table 4.5. LISREL output returned a "no non-zero modification indices for beta" message. The gamma modification indices reveal currently fixed paths that, if freed, would statistically significantly ($p < .01$) improve the fit of the comprehensive model. The theoretical meaningfulness of the proposed paths is critical in considering the possibility of freeing currently fixed parameters. According to Jöreskog and Sörbom (1993), one examines the modification indices and relaxes the parameter with the largest modification index if this parameter can be interpreted substantively. If it does not make sense to relax the parameter with the largest modification index, one considers the second largest modification index, and so forth. If the signs of certain parameters are specified *a priori*, positive or negative, the expected parameter changes associated with the modification indices for these parameters can be used to exclude models with parameters with the wrong sign.

McMahon *et al*. (2015) as well as Muthen and Muthen (2010) suggested indices > 6.64 as candidates for possible modification of a model. Large modification indices are highlighted in Table 4.7. There were no beta modification indices through which deletion or addition could improve the fit of the model.

Table 4.70

Modification Indices for Gamma

	COLLECT	POWER	MASCU	LTO	UA
	--------	--------	--------	--------	--------
OC	- -	.84	.22	23.03	1.056
JS	- -	.19	2.20	8.01	8.49
TI	- -	- -	- -	- -	- -
PSS	- -	5.65	2.62	.55	.55

Table 4.71

Modification Indices for Beta

	PSS	JS	OC	TU
	--------	--------	--------	--------
PSS	- -	- -	- -	.12
JS	- -	- -	- -	.69
OC	- -	- -	- -	.69
TI	- -	- -	- -	. - -

Upon further inspection, the gamma modification indices suggested that *long-term orientation* could affect both *Organisational commitment* and *Job satisfaction*. The suggestion of these paths makes theoretical sense. *Long-term orientation* culture/value is most likely to evoke organisational commitment in workers, which tends to be associated with job satisfaction, probable through reciprocity. It is also possible to create a path between *Uncertainty avoidance* and *job satisfaction*. Individuals who have the propensity to follow rules, guidelines and policies may be expected to be highly satisfied with their jobs if they have structure. Hence, this empirical recommendation also makes theoretical sense. The expected change is significant and positive in both cases. However, freeing the path with the largest modification index can affect the remaining modification indices. Future studies should consider

incorporating the modification index recommendations, provided it makes theoretical sense and validate the revised model on a fresh sample.

4.11. POWER ASSESSMENT

McQuitty (2004) contends that statistical power for structural equation models is essential because it is associated with the validity with which decisions on test results can be made with confidence. Statistical power is related to the ability of a test to differentiate between good and bad models. Statistical power refers to the probability of rejecting the null hypothesis if the model fits the data, given that the null hypothesis is false (Diamantopoulos & Siguaw, 2000). Two levels of error are possible and could to a certain extent be resolved by analysis of the statistical power of a model (Diamantopoulos & Siguaw, 2000; McQuitty, 2004). When testing whether a model fits exactly or closely, the probability of making a Type 1 error by rejecting a correct model is possible. In the present study, the close fit null hypothesis was rejected. This indicates the permissible position that the model is able to closely reproduce the population covariance matrix. The question is, however, whether the decision not to reject (H_{02}) was the correct decision. An RMSEA result indicates that if the null hypothesis is true (that is, the model is correct in the population), then the probability of incorrectly rejecting the null hypothesis is low (that is less than five times out of 100 if = .05) (Diamantopoulos & Siguaw, 2000). However, another error that can occur is not to reject an incorrect model. This is known as a Type II error. The probability of making a Type II error therefore refers to the probability of not rejecting the null hypothesis given that the null hypothesis is false. Thus, the power assessment test indicates how likely it is that a false null hypothesis (that is the incorrect model) is rejected.

The analysis of statistical power is relevant once a decision on the exact and close fit null hypotheses has been reached to assist in deciding how likely it is that the decision to reject the specific hypothesis was wrong. Especially in small samples ascribing the decision not to reject the close fit null hypothesis to good model fit can be challenged by the alternative explanation that the statistical power was too low to reject H_{02} even when it is false, is not relevant here. The higher the degrees of freedom, the greater the power of the test (Diamantopoulos & Siguaw, 2000).

In the present study, syntax developed by Preacher and Coffman (2006) and available at http://www.quantpsy.org/rmsea/rmsea.htm was used to determine the statistical power of the

test of exact fit. For this purpose, a significance level of .05; a sample size of 325; and 111 degrees of freedom were specified. The null hypothesis of the RMSEA was set to .00 while the alternative hypothesis for the RMSEA was set to .05. The Preacher and Coffman (2006) software returned a power value of unity (.9993505).

Furthermore, using the same syntax developed by Preacher and Coffman (2006) in R was further used to determine the statistical power of the test of close fit. For this purpose, a significance level of .05; a sample size of 325; and 111 degrees of freedom were specified. The null hypothesis of the RMSEA was set to .05 while the alternative hypothesis for the RMSEA was set to .08. The Preacher and Coffman (2006) software returned a power value of unity (.9997494. Both the power value of the exact model fit and the close model fit boost confidence in the comprehensive LISREL model given the decision not to reject the close fit null hypothesis.

4.12. SUMMARY

This chapter reviewed the psychometric properties of the instruments used to measure the constructs under investigation. Item and dimensional analyses were conducted to determine the psychometric properties of the measures as well as identify and eliminate poor items. Confirmatory factor analyses (CFA) was also conducted to confirm the measurement structure underlying the measures of the latent variables measured by the CVSCALE, i.e. Collectivism, Power distance, Uncertainty avoidance, Masculinity and Long-term. Also, CFA was conducted to confirm the measurement structure underlying the Job Satisfaction Scale, Organisational Commitment Questionnaire, Perceived Organisational Support, Perceived Supervisory Support and Turnover Intention measures. The overall measurement and structural model fit indices were determined and their implications briefly discussed. Several fit indices were reviewed to test model fit. The results, generally, reflect a good fit of both the measurement and the comprehensive LISREL models. The null hypothesis of close fit was not rejected in the structural model (see p-value for test of close for in Table 4.55) as well as in the overall measurement model (see p-value for test of close fit in Table 4.46). The bulk of the fit statistics indicate good fit and the small percentage of large modification indices calculated for lambda-X matrices also indicate a good fit. The latent dimensions correlate moderately with each other in the sample with the exception of the correlations of turnover intention; perceived organisational support; with the rest of the constructs.

No excessively high correlations exist. Evidence for discriminant validity amongst the variables was determined using Farrell's (2006) method. The Preacher and Coffman (2006) R power calculation syntax software indicated a power value of unity thereby boosting confidence in the decision on the comprehensive LISREL model.

CHAPTER FIVE
DISCUSSION OF RESEARCH RESULTS, CONCLUSION AND RECOMMENDATIONS FOR FUTURE RESEARCH

5.1. INTRODUCTION

The previous chapters focused on the introduction of the research problem and the literature on the latent variables that determine turnover behaviour. The review of the literature in Chapter two showed that turnover intention depends on an array of individual/personal, organisational, economic-labour market as well as individual culture, work-related attitudes and support perceptions latent variables. The review of the existing literature culminated in the formulation of hypotheses geared towards answering the overarching research question. The overarching substantive research hypothesis and the subsequent path specific substantive research hypotheses presented in Chapter three were tested using structural equation modeling as well as multiple regression analysis. The results were presented in Chapter four and are now discussed in the present chapter. The current chapter further presents a summary of findings, conclusions of the study, managerial implications of research findings, limitations of the study and recommendations for future research areas.

5.2. AIM AND OBJECTIVES OF THE STUDY

The aim of the present study was to answer the question: To what extent do job satisfaction, organisational commitment, perceptions of organisational support and supervisory support and more importantly, Hofstede's cultural values at individual level explain variance in turnover intention among military healthcare workers? The specific objectives of the study consequently were to: elaborate and integrate these variables into an individual culture – work-related attitudes – support perceptions – turnover intention model; test the model's absolute fit; and evaluate the statistical significance of the hypothesised structural paths in the model.

5.2.1 Primary objective

The primary objectives of this current research endeavour is:

- To identify and evaluate the relationships that exist between selected variables that are antecedent (predictors) to employees' turnover intention;
- To conceptualise these predictor variables within the framework of a structural model; and

- To conduct an empirical study in order to establish the relationship between the selected antecedents of turnover intention and retention of healthcare military practitioners.

5.2.2 Secondary objectives

The secondary objectives of this study are:

- To review existing literature on selected antecedents of turnover intention in order to achieve the first primary objective; and
- To validate the conceptualised structural model of the selected antecedents of intention to quit using Structural Equation Modelling and other statistical analyses.

5.3. SUMMARY OF FINDINGS

The present study firstly aimed to ensure that the measurement scales utilised in this study to assess the relationships were construct valid and reliable. It was necessary to establish the validity and reliability of the measurement scales to ensure that the best possible statistical results would be attained when further analyses were performed. Before determining the fit of the measurement and structural models, item and exploratory factor analyses were performed on the measures used in the study. The main purpose of conducting item analysis was to determine the reliability coefficients of the scales as well as to identify items which were not correlating well with the other items in the scale before combining items into linear composites to represent the latent variables when fitting the proposed model to the data. This was accomplished through the use of the item statistics estimates provided as part of the output from the reliability analysis procedure available in SPSS version 23. Items correlating below .30 with the total score (Pallant, 2016) as well as items that would result in a significant increase in the Cronbach Alpha if deleted were eliminated from the study. Exceptions to this rule were made to retain as many of the items as possible in cases in which the reliability coefficients were already low and would not increase significantly even after deleting the items.

5.3.1 Conclusions regarding reliability analysis

The reliability coefficients of all the scales were determined to confirm that each of the items from the various instruments succeed in contributing to an internally consistent description of the specific scale in question. A Cronbach's Alpha (which is the indicator of the reliability of the scale) of above .70 was considered acceptable. Item-total correlations above .30 were also

considered as indicators of internal consistency (Du Preez, Visser & Jansen van Noordwyk, 2008; Nunnally, 1967; Olatunji *et al*. 2007). Most of the scale reliabilities ranged from adequate (at least α = .70) to excellent reliability coefficients (above α = .90) (Nunnally, 1967) except for the turnover intention scale (α = .68). The reliability coefficient of this scales fall marginally below the critical cut-off value of .70 (Nunnally, 1967). The results obtained in the present study indicated that the reliability analyses produced satisfactory results according to the above-mentioned guidelines. Table 5.1 provides a summary of the final reliability results for each of the measuring scales. The results also indicated that all items presented item-total correlations above the recommended cut-off value (.30). It was thus found that all the refined measurement instruments could be considered reliable for gathering information to test hypotheses.

Table 5.1

Measurement scale reliability results

Scale	No. of factors	Cronbach Alpha	Total-item correlations
Collectivism	6	.81	.510 - .618
Power distance	5	.76	.370 - .601
Uncertainty avoidance	5	.78	.459 - .669
Masculinity	4	.74	.434 - .676
Long-term orientation	5	.71	.359 - .643
Job satisfaction	10	.89	.524 - .722
Organisational commitment	10	.88	.421 - .704
Perceived organisational support	10	.77	.407 - .505
Perceived supervisory support	8	.97	.789 - .918
Turnover intention	4	.67	.359 - .595

5.3.2 Conclusions regarding EFA

After conducting item analyses the scales were subjected to exploratory factor analysis to determine whether they were uni-dimensional. The issue of uni-dimensionality was essential since item parcels were calculated to represent the constructs under investigation due to sample

size restrictions. The current sample size of 325 was not large enough to enable the use of individual items. Researchers have advised against randomly parcelling items derived from scales which are not uni-dimensional (Little, Cunningham, Shahar & Widaman, 2007). When parceling scales which are not uni-dimensional, it is recommended to parcel them in terms of their subscales or sub-dimensions (Little, *et al.*, 2007). The study adhered to this recommendation. In the process of ascertaining uni-dimensionality in the scales, complex items were eliminated to enhance discriminant validity. Most of the scales were found to be uni-dimensional, with the exception of the Job satisfaction and Perceived organisational support, both showing two factors for each (see Table 4.16 and Table 4.19, respectively). As reflected in Table 5.2, the percentage of variance explained for all the Revised CVSCALE sub-measures used in the study was greater than 50%.

Table 5.2

CVSCALE factor loadings

Scale	No. of items	Factor loadings	% of variance explained
Collectivism	6	.56 – .71	51.93
Power distance	5	.41 – .75	53.15
Uncertainty avoidance	5	.50 – .79	57.46
Masculinity	4	.49– .85	58.31
Long-term orientation	6	.39– .75	51.63

5.3.3 Conclusions regarding CFA, factor loadings and discriminant validity

Most of the indicator variables loaded statistically significantly ($p < .05$) on the latent variables they were tasked to reflect. Although the MASC_1 parcel for Masculinity loaded statistically significantly on its latent variable, it had an inadmissibly high values in the completely standardised solution. The MASC_2 (.26) for Masculinity, POS_2 for Perceived organisational support (.24) parcels and item ITS3 (.47) for Turnover Intention, respectively were low in comparison with the other completely standardised item parcel values which were generally

above .5. The squared multiple correlation (SMC) (R^2) of MASC_1 (Masculinity) had an inadmissibly high value while MASC_2 (Masculinity), LTO_1 and LTO_2 (Long-term orientation), POS_1 and POS_2 (indicators of Perceived Organisational Support) as well as items ITS1 and ITS 3 for Turnover intention, were also very low. The measurement model residuals indicate that the measurement model tends to underestimate the variance in the covariance between the composite indicator variables. The measurement model standardised residuals comprised 8 negative and 5 positive residuals. This indicates that the measurement model tends to slightly overestimate the covariance between variables. With regards to the measurement model discriminant validity, the method proposed by Farrell (2010), which involves comparing the average variance extracted (AVE) of each construct with the shared variance between the constructs, was used. The results indicated that this condition was met (see Table 4.46).

The decision reached on the success of the operationalisation of the measurement was that the measurement model showed reasonable (acceptable) model fit. This was based on the findings discussed above on goodness of fit indices, as displayed in Table 4.47, as well as the completely standardised factor loadings; the squared multiple correlations (R^2), measurement model residuals, modification indices and assessment of discriminant validity. It was therefore decided that judging from the measurement model fit, it will be possible to derive an unambiguous verdict on the fit of the structural model from the fit of the comprehensive LISREL model.

5.3.4 Conclusions regarding confirmatory factor analysis

In addition to item and dimensionality analysis, confirmatory factor analysis (CFA) was conducted to determine the factor structure and the measurement model fit of the five measures used in this study. The goodness-of-fit properties of the Revised CVSCALE measurement models showed reasonable model fit, as indicated in Table 4.21 and 5.3. An analysis of the indices reported in Table 4.21 and 5.3 indicated that the refined structure of each scale represented an acceptable fit with the data. The RMSEA of .058 of the Revised CVSCALE indicated reasonable model fit. The p-value of the close fit index, which less than .05 threshold, provided evidence of a suspect model fit. The SRMR value of .062, indicate reasonable fit.

The scale achieved NNFI (.91), CFI (.92), IFI (.92) indices are above .90, which represented reasonable fit, while GFI (.87), NFI (.86) and RFI (.84) missed the good fit threshold.

Confirmatory factor analysis (CFA) was also conducted to determine the factor structure and the measurement model fit of the Revised JSS scale. The goodness-of-fit properties of the measurement model showed good model fit, as indicated in Table 4.25 and 5.3. An analysis of the indices reported in Table 4.25 and 5.3 indicated that the refined structure of the JSS scale represented an acceptable fit with the data. The RMSEA of .043 indicated good model fit. The p-value of the close fit index, above the .05 threshold, provided evidence of good model fit. The SRMR value of .039 indicates good fit. The scale achieved NNFI (.99), CFI (.99), IFI (.99), GFI (.97), NFI (.99) and RFI (.99) indices all above .90, representing good fit.

Also, in addition to item and dimensionality analysis, confirmatory factor analysis (CFA) was conducted to determine the factor structure and the measurement model fit of the Revised OCQ scale. The goodness-of-fit properties of the measurement model showed reasonable model fit, as indicated in Table 4.29 and 5.3. An analysis of the indices reported in Table 4.29 and 5.3 indicated that the refined structure of the Revised Organisational Commitment scale represented an acceptable fit with the data. The RMSEA of .053 indicated reasonable model fit. The p-value of the close fit index, above the .05 threshold, provided evidence of reasonable model fit. The SRMR value of .021 indicate reasonable fit. The scale achieved NNFI (.99), CFI (.99), IFI (.99), GFI (.99), NFI (.99) and RFI (.98) indices which were all above .90, representing relatively acceptable fit.

Confirmatory factor analysis (CFA) was also conducted to determine the factor structure and the measurement model fit of the Revised PSS scale. The goodness-of-fit properties of the measurement model improved from poor to reasonable model fit, as indicated in Table 4.32 and 5.3, after systematic deletion of offending items. An analysis of the indices reported in Table 4.32 and 5.3 indicated that the structure of the Revised PSS scale represented a reasonable fit with the data. The RMSEA of .064 indicated reasonable model fit. The p-value of the close fit index, above the .05 threshold, provided evidence of reasonable model fit. The

SRMR value of .015 indicate reasonable/acceptable fit. The scale achieved NNFI (.99), CFI (.99), IFI (.99), GFI (.97) NFI (.99) and RFI (.99) indices, which were all above .90, representing reasonable fit.

Lastly, Confirmatory factor analysis (CFA) was conducted to determine the factor structure and the measurement model fit of the Revised POS scale. The goodness-of-fit properties of the measurement model showed good model fit, as indicated in Table 4.35 and 5.3. An analysis of the indices reported in Table 4.35 and 5.3 indicated that the refined structure of the POS scale represented an acceptable fit with the data. The RMSEA of .035 indicated good model fit. The p-value of the close fit index, above the .05 threshold, provided evidence of good model fit. The SRMR value of .038 indicate good fit. The scale achieved NNFI (.99), CFI (.99), IFI (.99), GFI (.97), NFI (.98) and RFI (.97) indices were all above .90, which representing good fit.

Table 5.3

Summary of Confirmatory Factor Analysis Goodness-of- fit statistics of the Scales Measurement Models

Scale	RMSEA	P-value close fit	SRMR	NNFI	CFI	IFI	GFI	NFI	RFI
CVSCALE (Revised)	.058	.020	.062	.91	.92	.92	.87	.86	.84
JSS	.087	.00032	.061	.97	.97	.97	.90	.96	.95
JSS (Revised)	.043	.62	.039	.99	.99	.99	.97	.99	.98
OCQ	.095	.00	.23	.93	.93	.93	.90	.90	.89
OCQ (Revised)	.053	.37	.021	.99	.99	.99	.99	.99	.98
PSS	.11	.00	.037	.98	.98	.98	.81	.98	.97
PSS (Revised)	.064	.27	.015	.99	.99	.99	.97	.99	.99
POS	.035	.77	.038	.99	.99	.99	.97	.98	.97
TI	.077	.12	.024	.93	.99	.99	.99	.98	.91

Lastly, in addition to item and dimensionality analysis, confirmatory factor analysis (CFA) was also conducted to determine the factor structure and the measurement model fit of the Revised Turnover Intention scale. The goodness-of-fit properties of the measurement model was improved from a poor to a reasonable model fit, as indicated in Table 4.39 and 5.3. An analysis of the indices reported in Table 4.39 and 5.3 indicated that the structure of the Revised Turnover Intention scale represented a reasonable fit with the data. The RMSEA of .077 indicated reasonable model fit. The p-value of the close fit index, above the .05 threshold, provided evidence of reasonable model fit. The SRMR value of .024 indicate reasonable fit. The scale achieved NNFI (.93), CFI (.99), IFI (.99), GFI (.99), NFI (.98) and RFI (.91) indices which were all above .90, representing acceptable fit.

5.4. ASSESSMENT OF MODEL FIT

5.4.1 Measurement model

The measurement model fit assesses the extent to which a hypothesised model fits the data and provides information on the validities and reliabilities of the observed indicators (Diamantopoulos & Siguaw, 2000). The p-value associated with the Satorra-Bentler scaled Chi-square returned a value of 196.11 ($p = .00$) which indicates a significant test statistically ($p > .05$). The Chi-square value shows that the model does not show exact fit, thus rejecting the exact fit null hypothesis. This suggests that there is some discrepancy between the covariance matrix implied by the measurement model and the observed covariance matrix, thus rejecting the exact fit null hypothesis (H_{01a}) indicated by the following hypothesis:

H01a: RMSEA = 0

Ha1a: RMSEA > 0

The LISREL programme also tests the null hypothesis of close fit, (H_{01b} RMSEA $\leq .05$) by calculating the conditional probability under the assumption that H_0: RMSEA < .05 is true in the population. A probability value of .57 is returned; see table 4.47. The close fit null hypothesis, depicted below, is therefore not rejected.

H01b: RMSEA .05

Ha1b: RMSEA > .05

5.4.2 Comprehensive LISREL model

The structural model describes the relations among the latent variables. The structural model fit generally shows a reasonable model fit with the data. The exact fit null hypothesis of the structural model was rejected since the Satorra-Bentler Scaled Chi-Square returned a value of 245.25 (P = .00).

H02a: RMSEA = 0

H_{a2a}: RMSEA > 0

If the overarching structural model substantive research hypothesis would be interpreted to mean that the structural model provides an approximate description of the psychological process that determines turnover intention, the substantive research hypothesis translates into the following close fit null hypothesis. Since a probability value of .018 is returned in Table 4.55, the close fit null hypothesis (depicted below) is therefore not rejected.

H02b: RMSEA ≤ .05

Ha2b: RMSEA > .05

The remaining fit indices generally indicated acceptable fit although the standardised RMR value of .050 missed the good fit category. The GFI value (.91) achieved the acceptable fit level while the relative fit indices indicated a good fit of the structural model over the independence model, as indicated by values above .90 (Diamantopoulos & Siguaw, 2000). Further examination of the structural model residual distribution showed that the distribution of the standardised residuals was positively skewed, implying that the model was overestimating the observed covariance terms. Four large positive standardised residuals and nine large negative standardised residual indicate 13 observed covariance terms in the observed sample covariance matrix being poorly estimated by the derived model parameter estimates (see Figure 4.4). An examination of the Q-plot revealed a clear deviation from the dotted line, thereby providing further evidence that the models did not fit perfectly (see Figure 4.5).

An examination of the beta and gamma modification indices shows possible additions that could have been implemented to modify the structural model. These were not subsequently implemented. Future studies should consider incorporating the modification indices recommendations, provided it makes theoretical sense and validate the model on a fresh sample. The fit of the structural model cannot be directly ascertained by fitting the structural model as such to data. The conclusion is that the structural model does not show exact fit, but

good close fit. The acceptable close fit obtained for the structural model in the sample warrants the interpretation of the structural model parameter estimates.

5.4.3 Power assessment

An analysis of statistical power using syntax developed by Preacher and Coffman (2006) in R was performed. For this purpose, a significance level of .05, a sample size of 325, and 107 degrees of freedom were specified. The null hypothesis of the RMSEA was set to .05 while the alternative hypothesis for the RMSEA was set to.08. The Preacher and Coffman (2006) software returned a power value of unity which provided further confidence in the comprehensive model.

5.5. ASSESSMENT OF MODEL HYPOTHESES

The overarching structural model substantive research hypotheses were dissected into 26 more detailed, path-specific substantive research hypotheses. The findings on the hypotheses are discussed below. With null hypotheses 1 and 2 having been tested in the above sections for close fit of the measurement and the structural models, the following section examines testing of hypotheses 3 to 27.

Hypothesis 3: *Collectivism* significantly and positively affects *Job satisfaction*

The t-value in the gamma matrix (2.18; $p < .05$) (see Table 4.57) indicates that the null hypothesis, which states that *Collectivism* has no statistically significant effect on *Job satisfaction* (hypothesis 3, H_{03}: $\gamma_{11} = 0$) can be rejected in favour of H_{a3} given that the t-value associated with this path is $\geq |1.65|$. A significant ($p < .05$) positive relationship is therefore evident between *Collectivism* and *Job Satisfaction*. H_{03}: $\gamma_{11} = 0$ can be rejected in favour of H_{a3}: $\gamma_{11} > 0$, suggesting that the proposed relationship between these two latent variables was supported. Thus, the relationship postulated between *Collectivism* and *Job satisfaction* in the structural model, is corroborated. This result could be interpreted to mean that *Collectivism* has a significant positive effect on *Job satisfaction*, and that collectivistic oriented employees will be significantly more satisfied with their jobs than individuals who are less collectivist or individualist.

This result could be interpreted to mean that collectivistic individuals would be high on *Job satisfaction*, but it would be expected of individualistic oriented individuals, with their high propensity for competition, to develop higher stress levels (Hofstede, 1980; Matsumoto &

Juang, 2017) and subsequently less satisfaction with their job. This finding could also be attributed to the possibility that collectivist oriented individuals have a high propensity for being supportive and being helpful to co-workers. They strive for creating a warm, congenial work atmosphere (Hui & Yee, 1999), thus increasing the likeliness of feeling highly satisfied with their jobs. On the other hand, individualist orientated employees are likely to have the tendency to prioritise their own well-being and to engage in competitive behaviour, which is likely to increase their stress levels and negatively impact on their satisfaction with their jobs (Matsumoto & Juang, 2017).

This finding is consistent with similar findings in different studies conducted in different contexts. A study by Kirkman and Shapiro (2001) found a significant positive relationship between *Collectivism* and *Job satisfaction* in four work contexts: Belgium, United States, Finland and the Philippines. Furthermore, study by McKinnon *et al*. (2003) found positive and significant relationship between respect for people (a dimension of *Collectivism*) and job satisfaction in a Taiwanese context. Both studies demonstrated the effect of culture in general, and *Collectivism* in particular on the work affect/attitude of *Job satisfaction*. In a study by Noordin and Jusoff (2010), the generally more collectivist Malaysians were found to be significantly more satisfied with their jobs than their individualist Australian counterparts.

Similarly, Hui, Yee, and Eastman (1995) found that collectivist Hong Kong and Chinese employees were more satisfied with their jobs than individualist employees. They attributed this finding to the high value of harmonious relationships of collectivist individuals, their compromising and/or collaborating characteristics, propensity to participate in group activities and outcomes as well at their generally friendly and non-confrontational inclination. To be specific, Hui *et al*. (1995) reported significantly positive relationships between all the dimensions of satisfaction, namely work, pay, co-workers, promotion and supervision among collectivist Hong Kong and Chinese employees than among individualist employees. Similarly, Lund (2003) found that job satisfaction was positively related to clan culture, which is characterised by cohesiveness, teamwork, sense of family, loyalty and cohesion, all very important characteristics of Collectivism.

Although differences in the operationalisation of collectivism between the present study and previous studies exist, the same conclusion is reached in terms of support for the relationship between collectivism and job satisfaction. Given the avalanche of literature regarding the support of a positive and significant relationship between Collectivism and job satisfaction, and the impact of the former on the latter, it can reasonably be concluded that collectivist oriented individuals will be more likely be satisfied with their jobs than individualist oriented individuals, with further positive implications associated with this finding.

Hypothesis 4: *Collectivism* significantly and positively affects *Organisational commitment*

The t-value in the gamma matrix (2.62; $p < .05$) (Table 4. 57) indicates that the null hypothesis, that *Collectivism* has no statistically significant effect on *Organisational commitment* (hypothesis 4, H_{04}: $\gamma_{21} = 0$) can be rejected in favour of H_{a04} seeing that the t-value associated with this path is greater than |1.65|. A significant ($p < .05$) positive relationship is therefore evident between *Collectivism* and *Organisational commitment*. H_{04}: $\gamma_{21} = 0$ can be rejected in favour of H_{a04}: $\gamma_{21} > 0$, suggesting that the proposed relationship between these two latent variables was supported. Thus, the relationship postulated between *Collectivism* and *Organisational commitment* in the structural model is corroborated.

The implication of this parameter estimation result is that it would be expected that collectivistic orientation would increase employees' organisational commitment, implying that collectivistic employees will be significantly more committed to the organisation than individualistic employees. This result may be attributed to the observation that collectivist oriented individuals have high tendency for being supportive and helpful towards their co-workers. They strive for creating a warm, congenial work atmosphere (Hui & Yee, 1999), thus exerting more effort towards attainment of organisational goals, and show more attachment and commitment to the organisation. Collectivist individuals are characterised as seeking interpersonal relations that are harmonious and improve in-group loyalty (Hui & Lee, 1999) and improve their attachment to and identification with the organisation and which make them want to extend their continued membership with the organisation. Collectivists would feel more obliged to remain in the organisation, reflecting their higher organisational commitment.

This finding is consistent with previous findings by Kirkman and Shapiro (2001) who reported a positive and significant relationship between these two variables. Collectivism is characterised by stable social relationships, belonging to organisations, order, duty and security, collectivist individuals should put salience on team strive and group effort, and would sacrifice their personal goals for the sake of the group or organisation, which should translate to higher organisational commitment. Collectivist individuals should be more attached to the organisation, should identify with the organisation more and should be more obliged to remain in the organisation, thus reflecting their high group and/or organisational commitment.

A study by Wasti (2003) highlighted the influence of cultural values on organisational commitment. It found that, while individualist values were more associated with satisfaction with work and promotion as the primary determinants of affective and normative commitment, satisfaction with supervisor emerged as a primary determinant of affective and normative commitment among collectivist individuals. This finding underscored the distinction of individualist-collectivist orientation in determination of commitment to the organisation. Given the above literature and empirical evidence regarding the support of a positive and significant relationship between Collectivism and organisational commitment, and the impact of former on the latter, it can reasonably be concluded that collectivist oriented individuals will be more likely to be more committed with their jobs than those who are individualist oriented. Similarly, Felfe *et al*. (2008) found that Collectivism was significantly related to all three dimensions of organisational commitment: normative, affective and continuance, in three different employment contexts in Germany, Romania and China respectively. Wang *et al*. (2002) similarly found support that collectivist orientation has a positive effect on organisational commitment. A study by Foley *et al*. (2006) also reported evidence that Collectivism does have an impact on organisational commitment among Hong Kong law firm solicitors.

Although differences in the operationalisation of Collectivism and Organisational commitment between the present study and previous studies exist, the same conclusion of support for this relationship holds. Given the avalanche of literature regarding the support of a positive and significant relationship between Collectivism and organisational commitment, and the impact of the former on the latter, it can reasonably be concluded that collectivist oriented individuals

will be more likely to be committed to their jobs, with further positive implications associated with this finding.

Hypothesis 5: Collectivism significantly and positively affects *Perceived supervisory support*

The t-value in the gamma matrix (t-value = 1.72; p <.05) (Table 4. 57) indicates that the null hypothesis stating that *Collectivism* (ξ_1) has no statistically significant positive effect on *Perceived supervisory support* (η_3) (hypothesis 5, H_{05}: $\gamma_{31} = 0$) can be rejected in favour of H_{a5} given that the t-value associated with this path is greater than |1.65|. A significant ($p < .05$) relationship is therefore evident between *Collectivism* and *Perceived supervisory support*. The causal relationship hypothesised between Collectivism and *Perceived supervisory support* is thus corroborated. The implication of the parameter estimation result is that collectivistic orientation would significantly increase employees' perceived supervisory support, and collectivist individuals are likely to report significantly higher PSS than their individualist counterparts.

This result is consistent with the empirical findings of Tuzun and Kalemci (2011) which reported a positive and significant relationship between Collectivism and Perceived supervisory support among Turkish insurance employees. The direction of the relationship between Collectivism and perceived supervisory support was also consistent with expectations, theory and previous studies (Tuzun & Kalemci, 2011).

Collectivist oriented individuals have high propensity for supporting and helping co-workers; they strive for creating a warm, congenial work atmosphere (Hui & Yee, 1999), which should extend to the supervisor, thus increasing perceptions of supervisory support. Conversely, individualist employees focus on themselves and their own well-being and have high propensity for competition and assertiveness (Hofstede, 1980; Matsumoto & Juang, 2017), so they are more likely to confront the supervisor if they are unhappy, and therefore report higher perceptions of low supervisory support than collectivist individuals. Collectivist individuals pursue and have a high need for maintaining good interpersonal, harmonious, positive,

cooperative and compliant relationships which improve in-group loyalty (Hui & Yee, 1999), which in turn should extend to their supervisors. Collectivists aim to maintain positive relationships not only with their co-workers but also with their supervisors, therefore increasing perceptions of supervisory support. Aselage and Eisenberger (2003) argued that collectivist individuals strongly identify with their in-group because group membership is salient to them. Although differences in the operationalisation of the Collectivism scale between the present study and these studies exist, the same conclusion is reached in terms of support for a relationship between Collectivism and Perceived supervisory support.

Hypothesis 6: Collectivism significantly and positively affects *Perceived organisational support*

The linear regression analysis results for testing Hypothesis 6, (H_{06}: $\beta_{41} = 0$; H_{a6}: $\beta_{41} > 0$) (refer to Table 4.59) indicated that *Collectivism* explains 12.8 % of the variance in *Perceived organisational support* ($R^2 = .128$) and the variance explained by the model as a whole is significant (beta = .166; t = 2.970; $p < .05$). On the basis of these results, Hypothesis 6, which proposed that *Collectivism* has a significant effect on *Perceived organisational support* is substantiated. This result could be interpreted to mean that Collectivism does have a significant positive effect on POS, and that employees who report high levels of Collectivism will also report significantly higher POS than individuals who report less POS.

This finding is consistent with the theory which reckons that PSS tends to be extended to POS, and that high PSS is likely to be associated with high POS because employees regard their supervisors as organisational agents, and therefore extend feelings of supervisory support to organisational support (Eisenberger *et al*., 2002; Tan, 2008 Tuzun & Kalemci, 2011). Similarly, this result supports the findings of a study by van Knippenberg *et al*. (2015) which succeeded in establishing a positive significant relationship between collectivism and POS among Dutch governmental employees. Although differences in the operationalisation of Collectivism and POS between the present study and this study may exist, the same conclusion of support for this relationship holds. Given the support of a positive and significant relationship between Collectivism and POS, and the impact of the former on the latter, it can

reasonably be concluded that individuals high in Collectivism will be more likely to report high POS with further positive implications associated with this finding.

Hypothesis 7: *Collectivism* significantly and negatively affects *Turnover intention*

The values in the gamma matrix (t-value = -.63; $p > .05$) (Table 4. 57) further indicated that the null hypothesis stating that Collectivism (ξ_1) has no statistically significant negative effect on *Turnover intention* (η_5) (hypothesis 7, H_{07}: $\gamma_{51} = 0$) cannot be rejected, given that the t-value associated with this path is less than |1.65|. An insignificant ($p > .05$) relationship, is therefore evident between *Collectivism* and *Turnover intention*. The causal relationship hypothesised between Collectivism and *Turnover intention* is therefore not corroborated.

The implication of the estimation is that there is no reasonable evidence that collectivist oriented employees have lower turnover intentions; refuting a significant effect of collectivism on turnover intention. Stated differently, collectivist employees will not significantly have lower turnover intentions than their individualist counterparts. The result is unexpected and is inconsistent with theory, which associates collectivism with harmonious existence and group/organisational loyalty which manifest in low turnover intention and behaviour (Hofstede, 1980; Matsumoto & Juang, 2007. Similarly, this observation contradicts Ramamoorthy and Flood (2004) who associated Collectivism with organisational attachment and long tenure, further giving support to low turnover intentions presumption associated with collectivism. Loyalty, "We-consciousness/mentality", and maintenance of harmony reinforce loyalty and lower turnover intentions. A need to establish tight social frameworks would negatively impact on turnover intentions and the actual turnover behaviour and improve sense of belonging, being part of a family (Hofstede, 1980, 2011). Collectivist individuals should perceive their primary work groups as their in-group, as members of family, and may extend this perception of affiliation to the organisation.

This result is also inconsistent with previous research regarding the effect of Collectivism/Individualism on loyalty. A study by Ramamoorthy and Flood (2004) found negative relationships between loyalty and all of the four dimensions of Individualism, *i.e.*

competitiveness, solitary work preference, supremacy of individual goals and self-reliance, implying that individualist employees are more likely to have less loyalty towards the group and organisation, and thus higher turnover intention. Conversely, it would be expected that collectivist employees would have more loyalty and less turnover intentions and behaviour. A study by Walumbwa and Lawler (2003) found a significant negative and relatively moderate correlation between Collectivism and work withdrawal, and Collectivism and job withdrawal. Lund (2003) associated clan culture with loyalty, a very important characteristic of tenure and low turnover intention (Hofstede, 1980). Despite all this evidence for a significant negative effect of Collectivism on turnover intention, the results of this study failed to corroborate this relationship. This could have been caused be either random error, operationalization of the constructs or interaction among the variables of the study.

Hypothesis 8: *Power distance* significantly and negatively affects *Turnover intention*

The t-value in the gamma matrix (-1.40; $p > .05$) (refer to Table 4. 57) further indicates that the null hypothesis, stating that *Power distance* (ξ_2) has no statistically significant effect on *Turnover intention* (η_5) (hypothesis 8, H_{08}: $\gamma_{52} = 0$) cannot be rejected, given that the t-value associated with this path is less than |1.65|. An insignificant ($p > .05$) negative, relationship is therefore evident between *Power distance* and *Turnover intention*. The causal relationship hypothesised between *Power distance* and *Turnover intention* is therefore not corroborated. This result could be interpreted to mean that power distance does not have a significant negative effect on turnover intention, and employees who report high levels of power distance are not expected to report significantly higher turnover intentions than individuals who report less power distance.

This result is not consistent with the findings of a study by Stuurman *et al*. (2012) which reported a negative, significant correlation between power distance and turnover ($r = -.29$; $p < .05$). Furthermore, the result is inconsistent with theory which posit that high power distance is associated with low loyalty and higher job hopping because power distance oriented individuals seek more power and the associated benefits somewhere else if they do not get them in the current organisation (Matsumoto & Juang, 2017). An empirical study by Almutairi (2015) could not succeed in establishing support for the significance of the negative association

between power distance and turnover intention. Despite this evidence and expectations of a relationship between power distance and turnover, this relationship was not supported by the data in this study. This could have been caused by either random error or operationalization of the constructs.

Hypothesis 9: *Uncertainty avoidance* significantly and negatively affects *Turnover intention*

The t-value in the gamma matrix (-.53; $p > .05$ (Table 4. 57) indicates that the null hypothesis, that *Uncertainty avoidance* (ξ_3) has no statistically significant negative effect on *Turnover intention* (η_5) (hypothesis 9, H_{09}: $\gamma_{53} = 0$) cannot be rejected, given that the t-value associated with this path is less than |1.65|. An insignificant ($p > .05$) relationship is therefore evident between *Uncertainty avoidance* and *Turnover intention*. The causal relationship hypothesised between *Uncertainty avoidance* and *Turnover intention* is therefore not corroborated. This result could be interpreted to mean that uncertainty avoidance does not have a significant negative effect on turnover intention; employees who report high levels of uncertainty avoidance will not have significantly lower turnover intentions than individuals who have lower uncertainty avoidance orientation.

This result is not consistent with the findings of a study by Stuurman *et al*. (2012) which reported a negative significant correlation between uncertainty avoidance and turnover behaviour ($r = -.14$; $p < .05$) and Luu and Hattrup (2010) which supported the assertion that lower uncertainty avoidance is associated with higher turnover intentions. Quitting one's job or organisation is obviously associated with uncertainty if there is no job offer in place and also with uncertainty of starting in a new environment if the job offer is in place. Hence, individuals with high uncertainty avoidance are likely to harbour less turnover intention in order to minimize and/or avoid uncertainty. Similarly, Lu (2006) found that uncertainty avoidance was positively and significantly related to turnover intention ($r = .159$; $p < .01$) but the standardised structural path estimate results of that study could not establish a significant indirect effect of uncertainty avoidance on intention of leaving.

Characterised by a strong belief that the inherent challenge of uncertainty must be dealt with decisively, that tolerance is virtue, with little tolerance for deviant behaviours and ideas and high concern for security (Hofstede, 2011), high uncertainty avoidant individuals have high propensity for avoiding ambiguous situations, such as quitting one's job. Their propensity for high tolerance means that they tend to be low on turnover intention and turnover behaviour (Luu & Hattrup, 2010). Despite this sound argument and obvious expectations of a negative effect of uncertainty avoidance on turnover intentions, a significant negative relationship between uncertainty avoidance and turnover intention was not supported by the data in this study. This could have been caused be either random error, operationalization of the constructs or the interaction between the variables of the study.

Hypothesis 10: *Masculinity* significantly and positively affects *Turnover intention*

The t-value in the gamma matrix (1.32; $p > .05$ (Table 4. 57) further indicates that the null hypothesis, that *Masculinity* (ξ_4) has no statistically significant effect on *Turnover intention* (η_5) (hypothesis 10, H_{010}: $\gamma_{54} = 0$) cannot be rejected. A positive but insignificant ($p > .05$) relationship is therefore evident between *Masculinity* and *Turnover intention*. The causal relationship hypothesised between *Masculinity* and *intention* is therefore not corroborated. This result is not consistent with theory and empirical research. This result could be interpreted to mean that masculinity does not have a significant positive effect on turnover intention, and that employees who report high levels of masculinity will not have significantly higher turnover intentions than individuals who are less masculine oriented.

This result is unexpected because masculine individuals are characterised by a high need for achievement, advancement and accumulation of material gain (Hofstede, 1980). High masculine individuals are impatient, assertive, dominant, and financial rewards and ambition are salient for them (Matsumoto & Juang, 2017). It would be expected that because of their ambition and impatience, high masculine individuals would report high turnover intentions if they felt that their goals are blocked.

Though unexpected, this result is consistent with empirical findings by Almutairi (2015) who failed in establishing support for the significance of a negative association between masculinity and turnover intention. On the other hand, Wang *et al*. (2010) found that financial satisfaction (which is highly associated with masculinity) is a high negative predictor of turnover intention. Since masculine orientation is associated with financial and other material satisfaction and prospects (Cheng & Stockdale, 2003; Matsumoto & Juang, 2017), lack of financial satisfaction is expected to stimulate masculine individuals to assert themselves in the situation and consider quitting, thus increasing their turnover intentions. Notwithstanding this logical theoretical argument, this study did not support the hypothesis that *Masculinity* positively affects *Turnover intention*. This could have been caused by either random error or operationalization of the constructs.

Hypothesis 11: *Long-term orientation* significantly and negatively affects *Turnover intention*

The t-value in the gamma matrix (-.57; $p > .05$ (Refer to Table 4. 57) indicates that the null hypothesis, that *Long-term orientation* (ξ_5) has no statistically significant positive effect on *Turnover intention* (η_5) (hypothesis 11, H_{011}: $\gamma_{55} = 0$) cannot be rejected, given that the t-value associated with this path is less than |1.65|. A negative but insignificant ($p > .05$) relationship is therefore evident between *Long-term orientation* and *Turnover intention*. The causal relationship hypothesised between *Long-term orientation* and *Turnover intention* is therefore not corroborated. This result could be interpreted to mean that long-term orientation does not have a significant negative effect on turnover intention, and employees who are long-term oriented will not have significantly lower turnover intentions than individuals with short-term orientation.

This finding is inconsistent with Hofstede's (1986) cultural values theory, which associates long-term orientation with delayed gratification of social, emotional and/or financial rewards and further asserts that long-term oriented individuals have a propensity for long-term plans and goals (Matsumoto & Juang, 2017). Long-term oriented individuals are less likely to be motivated to harbour quitting intentions and enact the subsequent quitting behaviour because of their high perseverance tendencies. Long-term orientation is evidently associated with less

turnover intentions and behaviour. Walumbwa and Lawler (2003) maintained that long-term orientation is associated with long-term commitment to the organisation leading to long tenure. Sims, Ruppel and Zeiddler (2015) also acknowledged that individuals in long-term oriented cultures are taught to work hard and persevere, resulting in long-term employment tenure and of course low turnover intentions. Although there is strong theoretical background regarding the relationship between long-term orientation and low turnover intentions and behaviour, empirical studies that aimed at establishing this relationship could not be found by the researcher. Furthermore, despite this sound theoretical argument regarding the expected relationship between long-term orientation and turnover intention, the data in this study could not support the hypothesis between these variables. This could have been caused by either random error, operationalization of the constructs or the interaction between the variables of the study.

Hypothesis 12: *Job satisfaction* significantly and positively affects *Organisational commitment*

The t-value in the beta matrix (5.04; $p < .01$) (Table 4.58) indicate that the null hypothesis, that *Job satisfaction* (η_1) has no statistically significant effect on *Organisational commitment* (η_2) (hypothesis 12, H_{012}: $\beta_{21} = 0$ can be rejected in favour of H_{a12}, given that the t-value associated with this path is greater than |1.65|. A significant ($p < .05$) positive relationship is therefore evident between *Job satisfaction* and *Organisational commitment*. H_{012}: $\beta_{21} = 0$ can be rejected in favour of Ha_{11}: $\beta_{21} > 0$, suggesting that the proposed relationship between these two latent variables was supported. Thus, the relationship postulated between *Job satisfaction* (η_1) and *Organisational commitment* (η_2) in the structural model is corroborated. This result could be interpreted to mean that job satisfaction has a significant positive effect on organisational commitment, and that employees who report high levels of job satisfaction will be significantly more committed to their organisations than individuals who are less satisfied with their jobs. Lok and Crawford (2004) argued that when employees are dissatisfied with their jobs, they are likely to be less committed to their organisations.

This finding is consistent with similar findings reported in separate studies conducted within the South African context. Martin and Roodt (2008) found a direct, significant and positive

correlation between job satisfaction and organisational commitment amongst employees of tertiary institutions that had recently merged. Similarly, Lumley, Coetzee, Tladinyane, and Ferreira (2011) found that job satisfaction had a significant positive correlation with affective organisational commitment as well as normative organisational commitment in a South African information technology company. This result also lends support to the dominant view in literature that assumes that job satisfaction affects organisational commitment, a view which has been supported by a wealth of empirical evidence (Currivan, 2000).

Furthermore, this result is consistent with the existing theory and further empirical findings obtained from other studies regarding the relationship between these two variables. For example, Winterton's (2004) conceptual model of labour turnover and retention, Mobley *et al*.'s (1978) and Hom *et al.*'s (1992) models all suggested that job satisfaction has an effect on organisational commitment. Further empirical research has also established that job satisfaction determines organisational commitment (Mosadeghrad *et al.,* 2008; Shore & Martin, 1989). Job satisfied employees tend to reciprocate that which the organisation does to make them experience or perceive satisfaction by exerting more effort and applying increased commitment to their organisation. Similarly, Allen *et al*. (2008) found a strong positive relationship between job satisfaction and organisational commitment. Yücel (2012) also found that job satisfaction has a positive effect on organisational commitment in a Turkish work context. A plethora of other studies established evidence indicating that job satisfaction is either positively related to or have a direct significant positive effect on organisational commitment (Aryee *et al.*, 1991; Chen, 2006; Cohen & Golan, 2007; Dalessio *et al.,* 1998; Egan *et al*., 2004; Elangovan, 2001; Lee & Lui, 2007). Recently, Bufquin *et al*. (2017) reported a statistically significant positive effect of job satisfaction on organisational commitment.

Although differences in the operationalisation of the job satisfaction and organisational commitment between the present study and these studies exist, the same conclusion of support for this relationship between job satisfaction and organisational commitment prevails. Given the multitude of literature regarding the support of a positive and significant relationship between job satisfaction and organisational commitment, and the impact of the former on the latter, it can reasonably be concluded that job satisfied individuals will be more likely to be highly committed to their jobs with further positive implications associated with this finding.

Hypothesis 13: *Organisational commitment* significantly and negatively affects *Turnover intention*

The t-value in the beta matrix (-3.813p < .01) (Table 4. 58) indicates that the null hypothesis, that *Organisational commitment* (η_2) has no statistically significant effect on *Turnover intention* (η_5) (hypothesis 13, H_{013}: $\beta_{52} = 0$) can be rejected in favour of H_{a13} given that the t-value associated with this path is greater than |1.65|. A significant ($p < .01$) negative relationship is therefore evident between *Organisational commitment* and *Turnover intention*. H_{013}: $\beta_{52} = 0$ can be rejected in favour of H_{a13}: $\beta_{52} < 0$, suggesting that the proposed relationship between these two latent variables was supported. Thus, the relationship postulated between *Organisational commitment* and *Turnover intention* in the structural model is corroborated. This result could be interpreted to mean that organisational commitment does have a significant negative effect on turnover intention, and that employees who report high levels of organisational commitment will have significantly lower turnover intentions than individuals who report less organisational commitment. Dimensions of organisational commitment, *i.e.* continuance, affective and normative commitments, have been shown to be associated with organisational identification, continued organisational membership, perceived obligation to remain with the organisation, and low intention to leave (Jaros, 1997; Meyer & Allen, 1991). It is expected that highly committed employees identify with the organisation, have less turnover intention and have longer tenure in the organisation.

This result is consistent with both the theoretical propositions (Hom *et al*., 1992; Martin, 2004; Mobley, 1979; Yang & Lee, 2009) and results of previous studies (Ali & Baloch, 2009; Aryee *et al.*, 1991; van Breukelen *et al*., 2004; Chen, 2006; Cohen & Golan, 2007; Dalessio *et al*., 1998; Egan *et al*., 2004; Elangovan, 2001; Filipova, 2009; Lee & Lui, 2007; Limyothin & Trichun, 2012; Mosadeghrad *et al*., 2008; Shore & Martin, 1989; Tumwesigye, 2010; Wasti, 2003) regarding the significant negative relationship between *Organisational commitment* and *Turnover intention*. Indeed, an employee who is highly committed to the organisation should demonstrate it through low intention of quitting the organisation and subsequently low quitting behaviour. An empirical study by Newman *et al*. (2011) demonstrated that both affective and continuance commitment have significant negative effect on turnover intention. Lum *et al*.

(1998) found that the effect of organisational commitment on turnover intention is the strongest amongst a number of other antecedents of turnover intention that included job satisfaction. Furthermore, Yücel (2012) found that organisational commitment has a negative effect on turnover intention in a Turkish work context. Also, Newman *et al*. (2010) found evidence that organisational commitment was significantly and negatively correlated with affective turnover intention, and that the former has a significant negative effect on the latter, in a multinational service sector Chinese organisation. A plethora of other studies succeeded in establishing evidence indicating that organisational commitment is either negatively related to or have a direct significant negative effect on turnover intentions (Chen, 2006; Cohen & Golan, 2007; Egan *et al.,* 2004; Lee & Lui, 2007). Recently, Bufquin *et al*. (2017) reported a statistically significant negative effect of organisational commitment on turnover intention.

Although differences in the operationalisation of organisational commitment and turnover intention between the present study and these studies exist, the same conclusion of support for this relationship holds. Given the vast amount of literature regarding the support of a negative and significant relationship between organisational commitment and turnover intention, and the impact of the former on the latter, it can reasonably be concluded that employees who are highly committed to the organisation will have less turnover intention.

Hypothesis 14: *Job satisfaction* significantly and negatively affects *Turnover intention*

The t-value in the beta matrix (-1.70; $p < .05$) (Table 4. 58) indicates that the null hypothesis, that *Job satisfaction* (η_1) has no statistically significant effect on *Turnover intention* (η_5) (hypothesis 14, H_{014}: $\beta_{51} = 0$) can be rejected in favour of H_{a14} given that the t-value associated with this path is greater than |1.65|. A significant ($p < .05$) negative relationship is therefore evident between *Job satisfaction* (η_1) and *Turnover intention* (η_5). H_{014}: $\beta_{51} = 0$ can be rejected in favour of H_{a14}: $\beta_{51} > 0$, suggesting that the proposed relationship between these two latent variables was supported. Thus, the relationship postulated between *Job satisfaction* and *Turnover intention* in the structural model is corroborated. This result could be interpreted to mean that job satisfaction has a significant negative effect on turnover intention and employees who are highly satisfied with their jobs will report significantly lower turnover intentions than individuals who report being less satisfied with their jobs.

This result is consistent with both the theoretical propositions (Boles *et al.,* 2003; Lum *et al*., 1998; Zaghloul *et al*., 2003) and results of previous studies (e.g., Galletta *et al*., 2011; Shore & Martin, 1989; Yang & Bartlett, 2004;). Job-satisfied employees tend to have positive affectionate perception of the organisation and low intention of quitting. A study by Lu (2006) found that job satisfaction has a significant impact on turnover intention among Taiwanese hotel employees. Similarly, Allen *et al*. (2003) found a strong negative relationship between job satisfaction and turnover intention. Khawaldeh *et al*. (2014) also found a negative significant relationship between job satisfaction and turnover intention among Jordanian communications workers. Furthermore, this finding is consistent with similar findings in separate studies conducted within the South African context (Lumley *et al.*, 2011; Martin & Roodt, 2008). Both studies found a significant, direct negative correlation between job satisfaction and intention to quit. According to Martin and Roodt (2008), strong correlation between job satisfaction and turnover intention may be indicative of employees' rejection of their jobs rather than of the organisation.

Furthermore, Yücel (2012) found that job satisfaction has a negative effect on turnover intention in a Turkish work context. Lambert *et al*., (2001) found that amongst a number of demographic and work environment variables, job satisfaction had the highest significant, direct but negative effect on turnover intention. Also, an empirical study by Almutairi (2015) established evidence of the significance of the negative association between job satisfaction and turnover intention among healthcare workers in Saudi Arabia and the United States. Mbah and Ikemefuna (2012) found that job satisfaction reduces turnover intention in the oil producing work context of Nigeria. Lu (2006) also found that job satisfaction was significantly, directly and negatively related to turnover intention in a sample of Taipei frontline hotel workers. Similarly, a plethora of other studies found evidence of a significant negative relationship between job satistaction and turnover intention (e.g. Aryee *et al*., 2001; Chen, 2006; Cohen & Golan, 2007; Dalessio *et al*.; 1998; Egan *et al*., 2004; Elangovan, 2001; Lee & Lui, 2007; Zimmerman & Darnold, 2009). Recently, Allisey *et al*. (2014), Akhtar et al. (2016) and Bufquin *et al*. (2017) all reported strong significant and negative associations between job satisfaction and turnover intentions.

Although differences in the operationalisation of job satisfaction and turnover between the present study and these studies exist, the same conclusion of support for this relationship holds. Given the array of existing literature regarding the support of a negative and significant relationship between job satisfaction and turnover intention, and the impact of the former on the latter, it can reasonably be concluded that job satisfied individuals will be less likely to report turnover intentions with further positive implications associated with this finding.

Hypothesis 15: *Perceived supervisory* significantly and positively affects *Job satisfaction*

The t-value in the beta matrix (8.65; $p < .05$) (Table 4. 58) indicates that the null hypothesis, that *Perceived supervisory support* (η_3) has no statistically significant effect on *Job satisfaction* (η_1) (hypothesis 15, H_{015}: $\beta_{13} = 0$) can be rejected in favour of H_{a15}. The results indicate that *PSS* is a significant predictor of *Job satisfaction*. Thus, the relationship postulated between *Perceived supervisory support* (η_3) and *Job satisfaction* (η_1) in the structural model is corroborated. In addition, the sign associated with this significant β parameter estimate ($p < .05$) is consistent with the nature of the relationship hypothesised to exist between these latent variables. This result could be interpreted to mean that PSS does have a significant positive effect on job satisfaction and employees who report high levels of PSS will be significantly higher satisfied with their jobs than individuals who report less PSS.

This result is consistent with the findings of studies by Galletta, *et al*. (2011) and Lobburi (2012) which both reported significant positive but moderate relationship between PSS and job satisfaction in different contexts. It is expected that if employees feel that their supervisor supports them, they are likely to develop positive affective attitudes towards the supervisor and their jobs. Similarly, a study by Currivan (2000) found that PSS has a significant positive effect on job satisfaction. Recently, Allisey *et al*. (2013) established that supervisory/managerial support had a statistically significant positive effect on job satisfaction.

Although differences in the operationalisation of PSS and job satisfaction between the present study and these studies exist, the same conclusion of support for this relationship holds. Given the support of a positive and significant relationship between PSS and job satisfaction, and the impact of the former on the latter, it can reasonably be concluded that individuals who report

high PSS will be more likely to be satisfied with their jobs with further positive implications associated with this finding.

Hypothesis 16: *Perceived supervisory support* significantly and positively affects *Organisational commitment*

The t-value in the beta matrix (-1.40; $p > .05$) (Table 4. 58) indicates that the null hypothesis, that *Perceived supervisory support* (η_3) has no statistically significant positive effect on *Organisational commitment* (η_2) (hypothesis 16, H_{016}: $\beta_{23} = 0$) cannot be rejected. A nonsignificant ($p > .05$) and contrary to expectations and theory relationship is therefore evident between *Perceived supervisory support* and *Organisational commitment*. The causal relationship hypothesised between *Perceived supervisory support* and *Organisational commitment* is therefore not corroborated. This result could be interpreted to mean that PSS does not have a significant positive effect on organisational commitment. Referred to as counterintuitive (Yung and Cary, 2008), the direction of the relationship (negative) is unexpected and is inconsistent with theory and previous studies.

This finding is inconsistent with the Social Exchange Theory (SET) which ascertains that if employees feel that their supervisors support them, they reciprocate or return that in kind by showing more commitment to the organisation (Cropanzano & Mitchell, 2005). Also, this finding is inconsistent with the results of a study by Woo and Cheradurai (2012) which reported positive, significant relationships between perceived supervisory support and organisational commitment. In addition, this finding does not lend support to the findings of a study by Newman *et al.*, (2011) that indicated that PSS has a positive significant effect on affective commitment. Similarly, studies by Amma, *et al* (2014), Currivan (2000), De Cornick and Johnson (2009), Maertz *et al*. (2007) that found that PSS has a significant positive effect on organisational commitment were not supported by the results of this current study.

Despite abundant evidence pointing at the significance of a positive relationship between PSS and organisational commitment, this relationship was not supported by data in the current study and the direction of the relationship was not supported too. This unexpected result could be attributed to either random error, operationalization of the constructs or the interaction between POS and PSS.

Hypothesis 17: *Perceived supervisory support* significantly and positively affects *perceived organisational support*

The linear regression analysis results for testing this hypothesis (H_{017}: $\beta_{43} = 0$; $H_{a17:}$ $\beta_{43} > 0$) (refer to Table 4.60) indicated that *Perceived supervisory support* explains 22.6 % of the variance in *Perceived organisational support* ($R^2 = .226$) and the variance explained by the model as a whole is significant (beta = .475; t = 9.700; p < .05). Linear regression results further indicated that *PSS* is a significant predictor of *POS* (t = 9.700; p < .00). On the basis of these results, Hypothesis 17, which proposed that *Perceived supervisory support* has a significant effect on *Perceived organisational support* is substantiated. This result could be interpreted to mean that PSS does have a significant positive effect on POS, and that employees who report high levels of PSS will also report significantly higher POS than individuals who report less PSS.

This finding is consistent with the results of studies by Tuzun and Kalemci (2011), Eisenberger *et al*., (2002) and Tan (2008), all of which found a significant positive relationship between PSS and POS, and evidence that PSS actually precedes POS. Since employees regard their supervisors as organisational agents, perceptions of supervisory support are extended to feelings of organisational support (Eisenberger *et al*., 2002). Similarly, Ram and Prabhakar (2011) reported a significant positive relationship between POS and PSS amongst Jordanian hotel workers. In addition, a study by Casper *et al*., (2011) found that PSS was significantly and positively related POS among Brazilian professionals.

The relationship between PSS and POS is well-grounded in the Organisational Support Theory (OST) of Eisenberger *et al*., (2001). According to this theory, POS on the side of an organisation is associated with favourable employee treatment such as fair and favourable employee rewards, good working conditions, general fairness and supervisory support. On the side of an employee, POS is associated with attitudinal outcomes such as job satisfaction and organisational commitment as a way for employees to reciprocate or pay back organisational benevolence and generosity (Beheshtifar & Herat, 2013). This implies that the effect of PSS

on POS is a natural reciprocational employee response, an employee opportunity to appreciate the organisation in return.

Although differences in the operationalisation of PSS and POS between the present study and these studies exist, the same conclusion of support for this relationship holds. Given the support of a positive and significant relationship between PSS and POS, and the impact of the former on the latter, it can reasonably be concluded that individuals high in PSS will be more likely to report high POS with further positive implications associated with this finding.

Hypothesis 18: *Perceived supervisory support* significantly and negatively affects *Turnover intention*

The t-value in the beta matrix (-.19; $p > .05$) (refer to Table 4. 58) indicates that the null hypothesis, that *Perceived Supervisory Support* (η_3) has no statistically significant negative effect on *Turnover intention* (η_5) (hypothesis 18, H_{018}: $\beta_{53} = 0$) can be rejected. An insignificant ($p > .05$) relationship is therefore evident between *Perceived Supervisory Support* and *Turnover intention*. The causal relationship hypothesised between *Perceived Supervisory Support* and *Turnover intention* is therefore not corroborated. This result could be interpreted to mean that PSS does not have a significant negative effect on turnover intention, and that employees who report high levels of PSS will not have significantly lower turnover intentions than individuals who report less PSS.

This result does not corroborate the expectations and previous empirical research. For example, Ariyabuddhiphongs and Kahn (2017) argued that immediate managers/supervisors are the best predictors of turnover intention since their support determines whether employees stay or leave an organisation. However, Adil and Awais (2016) empirically established that a close relationship that is built on mutual trust between a leader/supervisor and the subordinate had a significant negative effect on turnover intention.

Furthermore, this finding is inconsistent with the results of studies by Tuzun and Kalemci (2011) and Tan (2008) who both reported negative, significant correlations between PSS and turnover intention in their empirical investigations among Turkish insurance employees and Malaysian knowledge workers, respectively. It is expected that if employees feel that they receive support from their supervisors and by extension from the organisation (Eisenberger *et al*., 2002), they are likely to develop positive perceptions of the organisation, which in turn will increase their sense of attachment with the organisation (Wang, 2014) and subsequently effect low turnover intentions (Mustapha *et al.*, 2011).

Allen *et al*. (2010) argued that the way supervisors treat their subordinates has a profound effect on the latter's turnover intention, responses or turnover. If the employees feel that their supervisor treat them fairly and is supportive, they are likely to have low turnover intentions and/or responses. Conversely, if they feel the supervisor does not care for their well-being, is unfair and unsupportive to them, their turnover intentions are likely to increase. This argument is reminiscent of the Eisenberger *et al*.,'s (2002) Support Theory of reciprocation of good behaviours between the supervisor and the employees. An empirical study of Allen *et al.* (2010) found that PSS has a significant negative effect on turnover intentions in a sample from the South Korean manufacturing sector. Newman, *et al*. (2010) found evidence that PSS was significantly and negatively correlated with turnover intention and that the former has a significant negative effect on the latter, in a multinational service sector Chinese organisation. Despite this evidence, the effect of PSS on turnover was not supported by the data in this study. This could be attributed to either random error, operationalization of the constructs or the interaction between the variables of the study.

Hypothesis 19: *Perceived organisational support* significantly and positively affects *Job satisfaction*

Linear regression analysis results for testing hypothesis 19 (H_{019}: $\beta_{14} = 0$; $H_{a19:}$ $\beta_{14} > 0$) (Refer to Table 4.61) indicate that *Perceived organisational support* explained 24% variance on *Job satisfaction* ($R^2 = .240$), and the variance explained by the model as a whole was significant (beta = .490; t = 1.095; $p < .01$). Linear regression results further indicated that *POS* is a significant predictor of *Job satisfaction* (t = 1.095; $p < .00$). On the basis of these results,

Hypothesis 19, which proposed that *Perceived organisational support* has a significant causal effect on *Job satisfaction* was substantiated. This result could be interpreted to mean that POS has a significant positive effect on organisational commitment, and that employees who report high levels of POS will also be more satisfied with their jobs.

The positive relationship between POS and job satisfaction is explained by Eisenberger's (2001) organisational support theory (OST). According to the OST, the organisation provides favourable employee treatment through rewards, good working conditions, fairness and supervisory support while employees reciprocate this organisational goodwill, benevolence and generosity by positive attitudinal outcomes of job satisfaction and organisational commitment. This implies that the effect of POS on job satisfaction is a natural employee reciprocational response as employees appreciate the organisation in return.

This finding is consistent with the results of an empirical investigation by Allen *et al*. (2003), which found a strong positive relationship between POS and job satisfaction amongst sales-people and insurance agents in the American work context. Similarly, Wann-Yih and Htail (2011) reported a relatively high positive correlation between POS and job satisfaction in a Taiwanese hospitality sample. Also, Fard *et al*. (2015) reported a significant, positive, strong meaningful relationship between POS and job satisfaction among financial sector institution employees in Iran. Hochwater, Kacmar, Perrewe and Johnson (2003) reported a significant, positive, strong meaningful relationship between POS and satisfaction among full-time working university students in the United State of America.

Although differences in the operationalisation of POS and job satisfaction between the present study and these studies exist, the same conclusion of support for this relationship holds. Given the support of a positive and significant relationship between POS and job satisfaction, and the impact of the former on the latter, it can reasonably be concluded that individuals who report high levels of POS will be more likely to be satisfied with their jobs with further positive implications associated with this finding.

Hypothesis 20: *Perceived organisational support* significantly and positively affects *Organisational commitment*

Linear regression analysis results (refer to Table 4.62) indicate that *Perceived organisational support* explains 24.9% variance in *Organisational commitment* (R^2 = .249) and the variance explained by the model as a whole is significant (beta = .499; t = 1.338; p < .01). Linear regression results further indicated that *POS* is a significant predictor of *Job satisfaction* (t = 1.338; p < .00). On the basis of this result, Hypothesis 20 (H_{020}: $\beta_{24} = 0$; $H_{a20:}$ $\beta_{24} > 0$), which proposed that *Perceived organisational support* has a significant effect on *Organisational commitment* was substantiated. This result could be interpreted to mean that POS has a significant positive effect on organisational commitment, and that employees who report high levels of POS will report higher attachment with the organisation and higher organisational commitment.

This significant positive effect of POS on organisational commitment is explained by the Social Exchange Theory and the associated reciprocity principle (Beheshtifar & Herat, 2013). This implies that perceptions of high organisational support reciprocate higher organisational attachment, loyalty and organisational commitment. According to the Organisational Support Theory, POS on the one side of an organisation is associated with favourable employee treatment in terms of the rewards, good working conditions and fairness and supervisory support, and attitudinal outcomes of job satisfaction and organisational commitment on the side of the employee who now have the opportunity to reciprocate organisational benevolence and generosity (Beheshtifar & Herat, 2013). The effect of POS on organisational commitment is therefore a natural employee reciprocational response as employees appreciate the organisation in return of the organisation's favourable employee treatment.

This finding is consistent with results of a number of empirical studies. Wann-Yih and Htail's (2011) study found a significant positive relationship between POS and organisational commitment, with further evidence indicating that the former has a significant positive effect on the latter in a Taiwanese hospitality sample. Tansky and Cohen, (2001) found similar results characterised by a significant, positive high correlation among US hospital employees. Also, Fard *et al*. (2015) reported a significant, positive, strong meaningful relationship between POS and organisational commitment among financial sector employees in Iran. Similarly, Allen *et al.* (2003) found a strong positive relationship between POS and organisational commitment

among salespeople and insurance agents in the American work sector. Newman *et al*. (2010) found evidence that POS was significantly and positively correlated with affective organisational commitment and that the former has a significant positive effect on the latter in a China-based multinational service sector.

Although differences in the operationalisation of the POS between the present study and these studies exist, the same conclusion of support for this relationship holds. Given the multitude of literature regarding the support of a positive and significant relationship between POS and organisational commitment, and the impact of the former on the latter, it can reasonably be concluded that individuals who report high levels of POS will be more likely to be attached and committed to their organisations with further positive implications associated with this finding.

Hypothesis 21: *Perceived organisational support* significantly and negatively affects *Turnover intention*

Linear regression analysis results (refer to Table 4.63) indicate that *Perceived organisational support* explained 5.2 % variance of *Turnover intention* ($R^2 = .052$) and the variance explained by the model as a whole was significant (beta = -.228; t = -4.205; $p < .01$). Hypothesis 21 (H_{021}: $\beta_{54} = 0$; $H_{a21:}\ \beta_{54} > 0$), which proposed that *Perceived organisational support* has a significant effect on *Turnover intention* was therefore substantiated. This finding could be interpreted to mean that the significant negative relationship between POS and turnover intention means that employees who have high levels of POS will report low levels of turnover intention. Put the other way, this result could be interpreted to mean that POS has a significant negative effect on turnover intention, and that employees who report high levels of organisational support will report less turnover intentions of leaving the organisation.

This negative relationship between POS and turnover intention is explained by Eisenberger's (2001) OST which suggests that employees attribute organisational helpful behaviours to an organisation's intentions to support and reward them, and they in turn reciprocate by offering loyalty to the organisation (Eisenberger *et al*., 2002), and as a payback strategy, choose to stay

in the employment of the organisation, which in turn lowers turnover intention. According to OST, perceptions of organisational support are associated with low turnover intentions as a way of paying back and displaying organisational loyalty.

This finding is also consistent with the results of studies by Tumwesigye (2010) and Tuzun and Kalemci (2011). A study by Tumwesigye (2010) among postgraduate students working in the private, public and non-governmental sectors in Uganda provided evidence that POS is significantly and negatively related to turnover intention, and the former explained significant variance in the latter. Similarly, Tuzun and Kalemci (2011) found similar results among Turkish insurance employees. Allen *et al.* (2003) lent further support to the observed relationship between these two variables in a study that found a strong negative relationship between POS and turnover intention amongst salespeople and insurance agents in an American work context.

Although differences in the operationalisation of POS and turnover intention between the present study and the referenced studies exist, the same conclusion of support for this relationship holds. Given the wealth of literature regarding the support of a negative and significant relationship between POS and turnover intention, and the impact of the former on the latter, it can reasonably be concluded that high POS individuals will be less likely to exhibit turnover intentions, with associated positive implications with this finding.

Hypothesis 22: *Job satisfaction* mediates the effect of Collectivism on *Turnover intention*

Parameter estimation (see Table 4.57) results provided support for hypothesis 3, *i.e.* the significant effect of *Collectivism* on *Job satisfaction* (γ_{11} = .14; t = 2.18; p < .05), and also provided support for hypothesis 14, the significant effect of *Job satisfaction* on *Turnover intention* (β_{51} = -.28; t = 1.70; p < .05). The direct effect of *Collectivism* on *Turnover intention* was not corroborated (t = < |1.65|; p > .05). The rejection of the direct effect of an independent variable on a dependent variable when the effect of an independent variable on a mediation variable, and the effect of a mediation variable on a dependent variable are substantiated, corroborates full mediation (Zhao *et al.*, 2005). Furthermore, LISREL unstandardized indirect

effect of *Collectivism* on *Turnover intention* is indicated as significant (t = -3.49) (refer to Table 4.67). Therefore, the mediating effect of *Job satisfaction* on the effect of Collectivism on *Turnover intention* is substantiated. This result implies that the effect of *Collectivism* on *Turnover intention* is not direct but is mediated through job satisfaction. This result suggests that Collectivism has only an indirect effect on turnover intention through Job satisfaction, and that Collectivism may be a more distal determinant of turnover intention as a critical antecedent of job satisfaction. Stated differently, collectivist individuals are likely to be highly job satisfied (Hofstede, 1980) and therefore are likely to report less organisational turnover intention. This result is consistent with the findings of a study by Luu and Hattrup (2010) which indicated that the effect of job satisfaction on turnover intention was stronger in individualist cultures of the US and France than in the collectivist cultures of Japan and the Philippines. In other words, these results confirmed the mediation effect of Collectivism in the negative effect of collectivism on turnover intention. Lu (2006) failed to establish a significant positive direct effect of individualism (a converse of Collectivism) on job satisfaction. Furthermore, Lu (2006) found a significant negative correlation between job satisfaction and turnover intention and reported that that the former has a significant negative effect on the latter, while the indirect effect of individualism on turnover intention was negative, but not significant. This present study failed to corroborate the indirect or mediating effect of individualism on turnover intention via job satisfaction.

Although differences in the operationalisation of Collectivism, job satisfaction and turnover intent between the present study and Luu and Hattrup's (2010) study exist, the same conclusion of support for this relationship holds. Given the empirical support regarding the support of a positive and significant relationship between collectivism and job satisfaction, and the negative effect of job satisfaction on turnover intention, it can reasonably be concluded that collectivist oriented individuals will be more likely to be satisfied with their jobs and will report less turnover intentions, with further positive implications associated with this finding.

Hypothesis 23: *Organisational commitment* mediates the effect of *Collectivism* on *Turnover intention*

Parameter estimation (see Table 4.58) results provided support for hypothesis 4, *i.e.* the significant effect of *Collectivism* on *organisational commitment* (γ_{21} = .17; t = 2.62; p < .05) and also for hypothesis 13, *i.e.* the significant effect of *Organisational commitment* on *Turnover intention* (β_{52} = -.32; t = -3.13; p < .05). The direct effect of *Collectivism* on *Turnover intention* was not corroborated (t = < |1.65|; p > .05). The rejection of the direct effect of an independent variable on a dependent variable when the effect of an independent variable on a mediation variable, and the effect of a mediation variable on a dependent variable are substantiated corroborates full mediation (Zhao *et al.*, 2005). Furthermore, LISREL unstandardized indirect effect of Collectivism on *Turnover intention* is indicated to be significant (t = -3.49) (refer to Table 4.67). The mediation effect of *Organisational commitment* on the effect of *Collectivism* on *Turnover intention* is substantiated. Therefore, the mediating effect of *Organisational commitment* on the effect of *Collectivism* on *Turnover intention* is substantiated. This implies that the effect of Collectivism on turnover intention is not direct but is mediated through organisational commitment. This result suggests that Collectivism has an indirect effect on turnover intention that goes via organisational commitment; and that Collectivism may be a more distal determinant of turnover intention as a critical antecedent of organisational commitment.

Hofstede's (1980) cultural value dimensions theory posits that collectivistic oriented individuals are likely to form close and intimate relationships with their in-groups or organisations, with higher organisational attachment, leading to less turnover intentions. This would imply more commitment to the organisation and less intentions to quit. Evidence of the negative effect of organisational commitment on turnover intention has been shown and was examined in the section above. On the basis of these observations it was expected that the hypothesis that organisational commitment mediate the effect of Collectivism on turnover intention would be corroborated. These results demonstrated that organisational commitment mediate the negative effect of Collectivism on turnover intention.

Hypothesis 24: *Organisational commitment* mediates the effect of *Job satisfaction* on *Turnover intention*

Path coefficient results provided support for the significant effect of *Job satisfaction* on *Organisational commitment* on *i.e.* hypothesis 12 (β_{21} = .77; t = 5.04; p < .05) and for hypothesis 13 provided support for the significant effect of *Organisational commitment* on *Turnover intention* (β_{52} = -.43; t = -3.13; p < .05). The direct effect of *Job satisfaction* on *Turnover intention* was also substantiated (β_{51} = -.28; t = -1.70; p < .05). The corroboration of the direct effect of an independent variable on a dependent variable, the effect of an independent variable on a mediation variable and the effect of a mediation variable on a dependent variable corroborates partial mediation (Zhao *et al.,* 2005). Furthermore, LISREL unstandardized indirect effect of *Job satisfaction* on *Turnover intention* is indicated to be significant (t = -2.92) (refer to Table 4.68). Therefore, the mediation effect of *Organisational commitment* on the effect of *Job satisfaction* on *Turnover intention* is substantiated. This result suggests that job satisfaction has an indirect effect on turnover intention that goes via organisational commitment; and that job satisfaction may be a more distal determinant of turnover intention as a critical antecedent of organisational commitment.

On the one hand, Khawaldeh *et al*. (2014) did not succeed in establishing empirical support on the significant mediating effect of organisational commitment on the effect of job satisfaction on turnover intention among Jordanian communications employees. On the other hand, and consistent with the results of this study, Khawaldeh *et a*l.'s (2015) study established that *Organisational commitment* has a significant mediating effect of *Job satisfaction* and *Turnover intention* among Jordanian communications employees. Similarly, an empirical investigation by Lum *et al*. (1998) among Canadian paediatric nurses found that the impact of job satisfaction on turnover intention is indirect and mediated by organisational commitment. Furthermore, a study by Tarigan and Ariani (2015) corroborated the mediating effect of organisational commitment on the negative effect of job satisfaction on turnover intention. Furthermore, these results are consistent with the turnover and turnover intention classical work of Mobley *et al*. (1979), Lee and Mitchell (1994), Lee *et al*. (1999), Mobley *et al.* (1979) and Winterton (2004), that held a strong view that the effect of job satisfaction on turnover is distal and is mediated by a number of other variable with organisational commitment as one of them.

Although differences in the operationalisation of job satisfaction, organisational commitment and turnover intention between the present study and these studies exist, the same conclusion of support for this relationship holds. Given the avalanche of literature regarding the support of a positive and significant relationship between job satisfaction and organisational commitment, and the impact of job satisfaction on organisational commitment, and the negative relationship between both job satisfaction and organisational commitment and turnover intention, it can reasonably be concluded that job satisfied individuals will be more likely to be committed to their jobs and report less turnover intentions with further positive implications associated with this finding.

Hypothesis 25: *Job satisfaction* mediates the effect of *Perceived supervisory support* on *Turnover intention*

Support for the significant effect of *Perceived supervisory support* on *Job satisfaction, i.e.,* Hypothesis 15 was corroborated (β_{13} = .69; t = 8.65; p < .05) and support for the significant effect of *Job satisfaction* on *Turnover intention, i.e.* Hypothesis 14 was also corroborated (β_{51} = -.28; t = -1.70; p < .05). The direct effect of *Perceived supervisory support* on *Turnover intention*, *i.e.* Hypothesis 18 was not substantiated (β_{53} = -.04; t = -.19; p >.05). The rejection of the direct effect of an independent variable on a dependent variable when the effect of an independent variable on a mediation variable, and the effect of a mediation variable on a dependent variable are substantiated, corroborates full mediation (Zhao *et al.,* 2005). Furthermore, LISREL unstandardized indirect effect of *Perceived supervisory support* on *Turnover intention* is indicated as significant (t = -2.80) (refer Table 4.68). Therefore, the mediating effect of *Job satisfaction* on the effect of *Perceived supervisory support* on *Turnover intention* is substantiated. This result suggests that PSS has an indirect effect on turnover intention that goes via job satisfaction, and that PSS may be a more distal determinant of turnover intention as a critical antecedent of job satisfaction.

This is consistent with the results of a study by Kang, Gatling and Kim (2015) that established that work attitudes mediated the relationship between *PSS* and *Turnover intention* in an urban US hospitality students sample. Similarly, a study by Lobburi (2012) among Thailand food-processing employees found that job satisfaction mediated the effect of perceived supervisory support on turnover intention. These studies demonstrated that employees who feel that they get support from their supervisor are likely to be more satisfied with their jobs, which in turn

should lead to less turnover intentions. Although differences in the operationalisation of the PSS, job satisfaction and turnover intention between the present study and these studies exist, the same conclusion of support for this relationship holds.

Hypothesis 26: *Perceived organisational support* mediates the effect of *Perceived Supervisory support* on *Turnover intention*

Linear regression analysis (refer to Table 4.64) was used to test Hypothesis 26, *i.e.* the mediating effect of *Perceived organisational support* on the effect of *Perceived supervisory support* on *Turnover intention* in accordance with Baron and Kenny's (1986) four step mediation model. On the basis of these results, Hypothesis 26 (H_{026}), the mediation effect of *Perceived supervisory support* on the relationship between *Perceived supervisory support* and *Turnover intention* was not supported. This result suggests that PSS has only an indirect effect on turnover intention that goes via POS, and that PSS may be a more distal determinant of turnover intention as a critical antecedent of POS. This result suggests that PSS does not have an indirect effect on turnover intention that is mediated by POS; that PSS may be a significant distal determinant of turnover intention as a critical antecedent of POS.

This result is not consistent with the findings of a study by Kalidass and Bahron (2015) who found that PSS had a significant relationship with turnover intentions only when the relationship was mediated by POS, corroborating the mediation effect of POS in the negative relationship between PSS and turnover intention. Similarly, Newman and Thanacoody (2010) found that PSS was significantly positively related to POS; both PSS and POS were significantly negatively related to turnover intention, while POS mediated the effect of PSS on turnover intention in a Chinese service sector work environment. These studies demonstrated that if employees feel that the supervisor supports them, they are likely to extend their positive perceptions to the organisation, which in turn leads to low intentions of leaving the organisation. Despite this sound argument, this mediation effect of POS on the relationship between PSS and turnover was not support by the data in this study. This could have been caused be either random error, operationalization of the constructs or the interaction between POS and PSS.

Hypothesis 27: *Perceived supervisory support* mediates the effect of Collectivism on *Turnover intention*

Support for the significant effect of *Collectivism* on *Perceived supervisory support*, *i.e.*, Hypothesis 5 was corroborated (γ_{31} = .10; t = 1.72; p < .05). Support for the significant effect of *Perceived supervisory support* on *Turnover intention*, *i.e.* Hypothesis 18 was not corroborated (β_{53} = -.03; t = -.19; p > .05). The direct effect of *Collectivism* on *Turnover intention*, *i.e.* hypothesis 7 was not substantiated (β_{51} = -.05; t = -.63; p >.05). The rejection of the direct effect of an independent variable on a dependent variable together with the rejection of the effect of a moderator variable on the dependent variable while the effect of the independent variable on a mediation variable is substantiated, refute mediation (Little, *et al*., 2007; Zhao *et al.*, 2005). Therefore, the mediation effect of *Perceived supervisory support* on the effect of Collectivism on *Turnover intention* is not substantiated. This result suggests that Collectivism does not have a significant indirect effect on turnover intention that goes via PSS; and that Collectivism may be a significant distal determinant of turnover intention as a critical antecedent of PSS.

This result was unexpected because Collectivistic individuals, with their pursuit for group cohesion are likely to be cooperative, obliging, compliant and report higher perceptions of supervisory support (Hofstede, 1980). Collectivistic individuals through their tendency to seek cohesion and positive relations, are likely to report positive relations with their supervisor (Shanock & Eisenberger, 2006). Collectivistic individuals' tendency to seek positive relations with supervisors is in turn expected to lower their turnover intentions. It was expected that the effect of Collectivism, if not direct affecting turnover intention, would at least indirectly affect it via its effect on PSS. Despite this plausible explanation, this hypothesis was not supported by the current study. This could have been caused either by random measurement error, operationalization of the constructs or the interaction between the variables of the study.

Hypothesis 28: *Organisational commitment* mediates the effect of *Perceived organisational support* on *Turnover intention*

Linear regression analysis was used to test Hypothesis 27 which proposed that *Organisational commitment* has a mediating effect on the effect of *Perceived organisational support* and

Turnover intention in accordance with Baron and Kenny's (1986) four step mediation model. Linear regression model in Table 4.65 confirmed full mediation effect of *Organisational commitment* on the relationship between *Perceived organisational support* and *Turnover intention*. This result suggests that perceived organisational support has only an indirect effect on turnover intention that goes via organisational commitment; and that POS may be a more distal determinant of turnover intention as a critical antecedent of job satisfaction (Allen *et al*., 2003).

This result is consistent with the findings of previous studies (e.g. Allen *et al*., 2003; Maertz *et al*., 2003, Tumwesigye, 2010). An empirical study by Maertz *et al*. (2007) found evidence showing that POS had a significant negative effect on turnover intention mediated through both affective and normative organisational commitment in an US social workers sample. Tumwesigye (2010) also found that organisational commitment did indeed mediate the effect of POS on turnover intention in a Ugandan sample. In accordance with the Support Theory (Eisenberger *et al*., 2002) high perceptions of organisational support reciprocate to highly committed employees, which manifests in low turnover intentions and behaviours.

Similarly, Newman and Thanacoody (2011) found evidence supporting the proposition that organisational commitment (affective commitment) does mediate the effect of POS on turnover intentions in a Chinese employment context. This explains the observation by the OST of Eisenberger *et a*l., (2001), which presupposes that POS creates obligations for employees to replicate by wanting to remain with the organisation, which in turn lowers turnover intentions. Similarly, Allen *et al.* (2003) found a significant negative relationship between POS and withdrawal/turnover intentions which was mediated by organisational commitment; the path from POS through organisational commitment to turnover intention accounted for most of the variance on turnover intention. They surveyed insurance workers and employees in a large US department store, and concluded that organisational commitment mediates the relationship between POS and turnover intention. Although differences in the operationalisation of POS, organisational commitment and turnover intention between the present study and these studies exist, the same conclusion of support for this relationship holds. Given the above theoretical and empirical evidence regarding the support of a mediating effect of organisational commitment in the relationship between POS and turnover intention, it can reasonably be

concluded that individuals who perceive high POS will be highly attached and committed to their organisations and will have less turnover intentions with further positive implications associated with this finding.

Hypothesis 29: *Job satisfaction* mediates the effect of *Perceived organisational support* on *Turnover intention*

Linear regression analysis was used to assess the mediating effect of *Job satisfaction* on the effect of *Perceived organisational support* on *Turnover intention*, (Hypothesis 28) in accordance with Baron and Kenny's (1986) four step mediation model. Linear regression results in Table 4.66 confirmed the full mediation effect of *Job satisfaction* on the effect of *Perceived organisational support* on *Turnover intention*. The result confirmed that *Job satisfaction* mediates the negative relationship between POS and *turnover intention* such that employees who perceive high levels POS will be highly satisfied with their jobs and will in turn report lower levels of turnover intentions compared to employees who perceive low POS. Stated differently, this results implies that the effect of POS on turnover intention has only an indirect effect through job satisfaction as a mediator, and that POS is a more distal determinant of turnover intention as a critical antecedent of job satisfaction (Allen *et al.*, 2003).

The observed result is consistent with the presuppositions of the Organisational Support Theory (OST) (Eisenberger *et al*., 2002). According to OST, perceptions of high organisational support reciprocate in highly satisfied employees, which extends to greater organisational attachment, identification and loyalty, which in turn will lead to low turnover intentions. This result is consistent with the empirical findings of a study by Allen *et al*. (2003) that reported a significant negative relationship between POS and withdrawal/turnover intentions which was mediated by job satisfaction among US workers in a large department store and among US insurance workers.

Although differences in the operationalisation of POS, job satisfaction and turnover intention between the present study and Allen *et al*.'s (2003) study exist, the same conclusion of support for this relationship holds. Given the above theoretical and empirical evidence regarding the support of a mediating effect of job satisfaction in the relationship between POS and turnover intention, it can reasonably be concluded that individuals who perceive high POS will be more

likely to be satisfied with their jobs and will have less intentions for turnover with further positive implications associated with this finding.

5.6. LIMITATIONS OF THE STUDY

Some important limitations of this study are discussed in this section. First, the findings of this study cannot be generalised to the broader population of military health practitioners without further replication. The sample that was used also consisted of administrative employees in a military health environment. The sample of 325 respondents is deemed limited for making generalisations to the population. In SEM bigger sample size has the advantage of enhancing the statistical power of the study. The fitted individual culture-work-related attitudes-perceived support-turnover intention structural model was also tested on a non-probability sample. The use of non-probability sampling precludes the drawing of a conclusion that the sample is representative of the target population, and measurement variability and bias cannot be controlled (Acharya, Prakash, Saxena, & Nigam, 2013).

Furthermore, due to the military health practitioner's perspective from which this study stems, one would want to argue that the sample needs to consist of only participants that qualify as military health practitioners. In this study 1.5% of the participants were administrative personnel who are not commonly regarded as military health practitioners, but as general workers. Although the number is small compared to the body of military health practitioner participants, it still remains a limitation of the study that the sample was not exclusively from a population of military health practitioners. Therefore, replication of this research on other samples and in different contexts is encouraged.

The second limitation relates to the measuring instruments used in this study. The instruments used are self-report measures. Self-report measures run the risk of social desirability which occurs when respondents attempt to manipulate the answers in order to create a more favourable impression of themselves, their job function and/or status in the organisation when completing an instrument (Paulhus & Vazire, 2007). This, in turn, impacts on the reported levels of the constructs investigated and it influences the results (Elmes, Kantowitz & Roediger, 2003). Furthermore, the questionnaire survey approach is subject to whether the reported results relate to the individuals' actual experiences, or mainly illustrate their perceptions. In other words, the respondents' perceptions may differ from the actual state of being, causing

respondents to rate themselves higher (or lower) on the constructs due to bias, skewed/inflated opinion and so on. Respondents may be tempted to create a more favourable, even inflated impression of themselves. Also, self-reports measures run the risk of adversely affecting their credibility because it can be hard to trust what people say about themselves (Paulhus & Vazire, 2007). That may affect the accuracy, reliability and validity of the results of this study. Furthermore, the *Turnover intention* scale indicated suspect psychometric properties and could have distorted the estimates and results of the study to a certain extent.

Thirdly, it should be noted that a good model fit in SEM does not imply causality (Diamantopoulos & Siguaw, 2000). Even though the structural model being evaluated hypothesised specific causal paths between the latent variables comprising the model, good model fit and significant path coefficients constitute insufficient evidence to conclude that these causal hypotheses have been confirmed. In the final analysis, this is not due to limitations in the analysis technique as such but rather due to the *ex post facto* nature of the study that precludes the experimental manipulation of the relevant latent exogenous and endogenous variables (Kerlinger & Lee, 2000).

The validity of some of the composite indicator variables also gave reason for concern. MASC-_1 (for the Masculinity) and ITS_1 (for Turnover intention) obtained inadmissible high values that exceeded unity; MASC_2 (.266) for the Masculinity scale, POS_2 (.244) for Perceived organisational support scale as well as TI_2 (.321) for Turnover intention scale item parcels were low in comparison with the other completely standardised item parcel values which were generally above .5. The squared multiple correlations (SMC) (R^2) for variables MASC_2 (Masculinity item parcel); LTO_2 (Long-term orientation item parcel); ITS_2 (Turnover Intention item parcel) and the indicators of the Perceived Organisational Support (POS_1; and POS_2) were also very low. Another limitation stems from the very low R^2 value associated with PSS (*Perceived supervisory support*), denoting that the model explains a very low proportion of only .02 variance in PSS. Future research will have to address these limitations.

5.7. CONTRIBUTIONS OF THE STUDY

The theoretical contribution of the present research undertaking stems from its ability to shed additional light towards better understanding of employee turnover/retention theory. This study has been able to validate the idea that job satisfaction and organisational commitment are pivotal, core determinants of turnover intention and the subsequent turnover behaviour. It also

explained the nature of the relationship between these two variables. Furthermore, this study introduced and tested the previously under-researched role of Hofstede's cultural value dimensions at individual level (Prasongsurkan, 2009; Yoo *et al*., 2011) in employee turnover intention. Regarding this, the most important theoretical contribution of this study is the finding that collectivism, uncertainty avoidance and long-term orientation play a role as determinants of job satisfaction and organisational commitment, and therefore have indirect impact on turnover intention via these variables.

Further theoretical contribution by this study stems from expanding the "core" turnover intention model that consists of the "core" determinants of job satisfaction and organisational commitment, and including Hofstede's cultural dimensions at individual level together with perceived support in POS and PSS to develop an integrated model. Testing this integrated model has shed further light on the dynamics amongst these variables and how they interact to impact on turnover intention.

Stemming directly from the above theoretical contribution, the practical contribution of the study concerns identifying collectivism as a precedent of job satisfaction and organisational commitment in the understanding of turnover intention. Although the significant direct effect of collectivism on turnover intention could not be established, because of its effect on job satisfaction and organisational commitment (both of which have direct significant effects on turnover intention), it could be targeted during employee selection as a way of identifying the prospective employees that are likely to be highly satisfied and committed and probable have less turnover intentions and the subsequent turnover behaviour in the early stages of human resources management. Complementing existing retention strategies, this would add value to the organisation's capability to retain talent, scarce skills and human capital.

5.8. SUGGESTIONS FOR FUTURE RESEARCH

The results of this study partially justify the use of the CVSCALE for selecting candidates who may harbour less turnover intentions and exhibit lower propensity for turnover behaviour. The results of this study indicated that Collectivism only had an indirect effect on Turnover intention that was mediated by Job satisfaction and Organisational commitment. Furthermore,

justification of the effect of increasing support for employees to increase retention and lower turnover intentions and subsequent behaviour was established.

Furthermore, Modification indices results suggested that uncertainty avoidance and long-term orientation may also have an indirect effect on turnover intention. Future research should examine the relationship between uncertainty avoidance and job satisfaction, as indicated by the modification indices (see Table 4.70). Although this relationship was not assessed, theoretically it appears plausible. Uncertainty avoidance is associated with comfort of working in a highly structured environment and adherence to rules and regulations as compared to working in a novel, unknown and surprising environment (Hofstede, 1994). The military environment is structured and could be referred to as high in uncertainty avoidance. High uncertainty avoidant individuals would therefore be expected to be highly satisfied in a military environment. This hypothesis would also raise the possibility of job satisfaction mediating the effect of uncertainty avoidance on turnover intention. Future studies will have to investigate the validity of these linkages.

Future research should also examine the relationship between long-term orientation, as well as job satisfaction and organisational commitment, as suggested by the modification indices (see Table 4.70). Although these relationships were not assessed, theoretically they do make some sense. Long-term orientation is associated with thrift and perseverance and delay in economic, social and/or emotional gratification (Hofstede, 1994). A study by Soeters (1997) found that military practitioners are high on long-term orientation as compared to their civilian counterparts. Perseverance and tenacity are intrinsic virtues associated with the military environment. On the basis of this argument, it is expected that military practitioners exhibit long-term orientation, higher job satisfaction as well as higher organisational commitment because of their high perseverance, and acceptance of delayed gratification. These hypotheses would also raise the possibility of job satisfaction and organisational commitment mediating the effect of long-term orientation on turnover intention. Future studies will have to investigate the validity of these linkages.

Future studies may have to cross-validate the pruned and modified model in a different sample derived from the same population. The possible expansion of the theoretical model by formally incorporating environmental, dispositional, economic and organisational variables that may impact on turnover intentions and behaviours is suggested for future studies.

5.9. PRACTICAL IMPLICATION OF FINDINGS

The major contribution of the present study relates to the role of Industrial Psychology in the formulation of credible and valid psychological explanations of turnover intention, to bring about desirable change in the turnover behaviour of military healthcare practitioners. In South Africa, serious shortage of healthcare practitioners in the public sector has been reported (Greyling & Stanz, 2010; Mokoka, Oosthuizen & Ehlers, 2010). This situation needs to be addressed to prevent crises in healthcare service provision. In the Department of Defence, the vacancy rate in the military healthcare service is estimated at 17.91%, and 11.21% for the medical professionals, while 22.59% of employee turnover in the Department is attributed to voluntary resignations/separations (Department of Defence Annual Report) (DoD, 2015).

Although there may be many underlying factors contributing towards turnover intention and behaviour, a frequently cited reason is dissatisfaction (Greyling & Stanz, 2010). The model presented in this study offers a plausible explanation of turnover intention. It therefore allows human resources practitioners, managers and I/O psychology practitioners to derive solutions towards reducing turnover intentions and actual turnover. Variance across employees in turnover intention and ultimately variance across employees in turnover behaviour is determined by an array of latent variables characterising the individual employee, the work and labour market environments respectively. In addition, these determining latent variables combine in a specific manner to determine the level of turnover intention and ultimately the turnover behaviour. Prediction is possible without the benefit of an explanatory model that identifies the determinants of turnover intention and that describes how these determinants combine to determine turnover behaviour. However, a valid understanding of the identity of the determinants of turnover intention in conjunction with a valid understanding of how they combine to determine turnover behaviour should nonetheless allow a theoretically better grounded prediction of turnover intention. The following practical recommendations can assist in predicting turnover intentions.

5.9.1 Recommendations

Three latent variables were found to affect *Turnover intention* directly in this study. First, *Organisational commitment* is one of the work-related attitudinal latent variables that was found to have a significant negative effect on *Turnover intention* directly. This result means that an increase in *Organisational commitment* is associated with a decrease in *Turnover*

intention, and if the participating organisation aims at lowering *Turnover intentions*, it has to increase *Organisational commitment*, among other things.

The results of this study also indicated that Collectivism has a direct positive effect on Organisational commitment and an indirect effect on Turnover intention that is mediated by Organisational commitment. In other words, Collectivism was identified as a precedent of Organisational commitment. This implies that identifying and complementing the current selection process by considering selection based on Collectivism, *albeit* with caution, could help human resources practitioners and I/O psychologists identify candidates who are likely to display high Organisational commitment and subsequently low Turnover intentions. This was supported by the finding that indicated that Organisational commitment mediates the effect of Collectivism on Turnover intention. Organisational commitment, as defined by Mowday *et al.* (1979), represents identification with the organisation, loyalty and high involvement. Furthermore, to successfully screen those applicants that will be highly committed to the military organisation and the prevailing working environment per se already during selection, human resources practitioners and managers should identify the variables that have a positive effect on individuals' commitment capacity. Also, managers and leaders should develop comprehensive models that explain and validate the antecedents of Organisational commitment and develop some coaching programmes to transform and modify employees' attitudes to be in sync with commitment to the organisation.

Perceived organisational support is also an important variable that has a direct negative effect on Turnover intention. An increase in POS is associated with a decrease in employees' Turnover intentions. POS involves meeting employees' expectations in terms of caring for their well-being and valuing their contribution (Colakoglu *et al*. 2010). Managers and I/O Psychology practitioners and the organisation may benefit from conducting workshops to establish exactly what employees' expectations are and what can be done to improve their well-being for reciprocal benefit. Understanding the specific organisational practices that increase perceptions of organisational support, and implementing them would not only have a direct effect of lowering turnover intentions, but would also increase job satisfaction and organisational commitment, and ultimately organisational performance.

Job satisfaction is another work-related attitude latent variable that has been found, in this study, to affect Turnover intention directly. This result means that an increase in Job

satisfaction leads to a decrease in Turnover intention. Thus, if the participating organisation wants to lower Turnover intentions, it has to increase Job satisfaction, among other interventions. Furthermore, the results of this study indicated that Collectivism has a direct positive effect on Job satisfaction and an indirect effect on turnover intention that is mediated through Job satisfaction. In other words, Collectivism was identified as a precedent of Job satisfaction. This further supports the idea that selecting applicants who are relatively high on Collectivism could in this work/organisational context impact positively on Job satisfaction and subsequently lower turnover intentions. This was also supported by the finding that indicated that Job satisfaction mediates the effect of Collectivism on Turnover intention. Job satisfaction, as defined by Harrison, Newman and Roth (2006), represents a positive appraisal of one's job. Furthermore, to successfully screen those applicants that have a high propensity to be satisfied with the military organisation and the prevailing environment during selection, human resources practitioners and managers should identify the variables that have a positive effect on individuals' Job satisfaction capacity. Managers should also develop comprehensive models that explain and validate the antecedents of Job satisfaction and develop coaching programmes to transform and modify employees' attitudes to be in synergy with organisational culture and objectives. Regular job satisfaction organisation surveys could also assist by shedding more light on the level of employee dis/satisfaction in the organisation to inform management of the appropriate steps to take in order to change attitude and behaviour, and reduce intention to leave.

Furthermore, the results of this study indicated that perceived support has a significant effect on Organisational commitment, lending support to Eisenberger *et al*.'s (2002) OST. Both Perceived supervisory support and Perceived organisational support have positive significant effects on Organisational commitment. From these results, it could be concluded that increasing both POS and PSS should increase Organisational commitment and subsequently lower Turnover intention. OST (Eisenberger *et al*., 2002) associates organisational support with valuing employees' contribution, caring for their well-being and a voluntary reciprocation of goodness on the part of the employees towards the organisation. Results also indicated that Job satisfaction has a direct positive and significant effect on Organisational commitment, implying that one of the ways to positively influence Organisational commitment is by increasing Job satisfaction.

In addition, the results of this study indicated that Perceived organisational support has a significant effect on Job satisfaction. The results indicated that both Perceived supervisory support and Perceived organisational support have positive significant effects on Job satisfaction. From these results, it could be concluded that increasing both POS and PSS should increase Job satisfaction and subsequently lower Turnover intention. OST (Eisenberger *et al*., 2002) associates organisational support with caring for the employees, valuing employees' contribution, caring for their well-being and a reciprocation of employees' goodness towards the organisation, which may manifest in increased job satisfaction. The organisation may, on the basis of this finding, identify those human resources practices that enhance the perceptions of organisational and supervisory support to adopt as part of its standard working procedures. The organisation may also benefit from conducting training, coaching, workshops, seminars and so on for the leadership, managers and supervisors with the purpose of training them to adopt subordinate appreciating, subordinate empowering practices.

Besides mediating between both Organisational commitment and Job satisfaction and Turnover intention, Perceived organisational support is an important organisational variable. Perceived organisational support in this study is a third variable with a direct negative significant effect on Turnover intention. The results of this study indicated that higher organisational support leads to lower turnover intentions. This finding implies that in order for the organisation to reduce turnover intentions and the associated behaviour amongst military health practitioners, it may have to establish the organisational practices that increase perceptions of organisational support and develop interventions to implement them.

Putting it all together, the structural model contains two individual work-related attitudes variables and one perceptual variable that have been shown to exert a significant influence in the structural model. Job satisfaction, organisational commitment and POS are person-centred latent variables that can potentially be influenced by interventions aimed at developing these variables. Retention of military health practitioners through lowering turnover intention in the organisation should be driven by selecting on Collectivism, increasing job satisfaction and organisational commitment and improving organisational support. Future studies will have to confirm the role of power distance, uncertainty avoidance, long-term orientation as well as masculinity in retention and lowering turnover intention.

5.10. CONCLUSION

Significant relationships were found between: Collectivism and Job satisfaction; Collectivism and Organisational commitment; Collectivism and Perceived supervisory support; Collectivism and Perceived organisational support; Job satisfaction and Organisational commitment; Organisational commitment and Turnover intention; Job satisfaction and Turnover intention; Perceived supervisory support and Job satisfaction; Perceived supervisory support and Organisational Commitment; Perceived organisational support and Job satisfaction; Perceived supervisory support and Perceived organisational support; Perceived organisational support and Job satisfaction; Perceived organisational support and Organisational commitment; Perceived organisational support and Turnover intention. Furthermore, the following mediation effects were found: Job satisfaction mediated the effect of Collectivism on Turnover intention; Organisational commitment mediated the effect of Collectivism on Turnover Intention; Organisational commitment mediated the effect of Job satisfaction on Turnover Intention; Job satisfaction mediated the effect of Perceived supervisory support of Turnover intention; Organisational Commitment mediated the effect of Perceived organisational support on Turnover intention; and Job satisfaction mediated the effect of Perceived organisational support on Turnover intention.

Support was not found for the relationships between: Collectivism and Turnover intention; Power distance and Turnover intention; Uncertainty avoidance and Turnover intention; Masculinity and Turnover intention; Long-term orientation and Turnover intention; Perceived supervisory support and Organisational commitment; Perceived Supervisory support and Turnover intention.

The mediating effect of Perceived organisational support between Perceived supervisory support and Turnover intention and the mediating effect of Perceived supervisory support on the effect of Collectivism on Turnover intention were not supported. The fit of the measurement and structural models can generally be regarded as reasonable fit; both models showed close fit. The statistical power of the model and the discriminant validity of the item parcels were ascertained. The limitations and suggestion for future studies have been highlighted. The results of the present study provide some important insights for human resources practitioners

on how to identify potential health military practitioners that are likely to have less intentions for turnover.

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