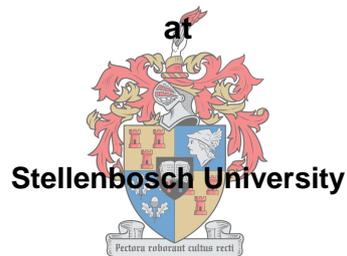


**RELATIONSHIP BETWEEN PERSONALITY, INTEGRITY AND
COUNTERPRODUCTIVE WORK BEHAVIOUR: A NAMIBIAN STUDY**

By

Oaitse Sameeng van Staden

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



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SUPERVISOR: PROF A.S. ENGELBRECHT

Department of Industrial Psychology

March 2018

DECLARATION

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March 2018

ABSTRACT

Organisations in collaboration with academic institutions have over years been looking at ways to understand and find interventions to curb negative behaviours in the workplace. These behaviours have over decades shown a detrimental and destructive impact on the functioning, progression and sustainability of organisations. Counterproductive work behaviours (CWB) are negative behaviours that hinder the proper functioning of organisations. Therefore this study focused on the causal factors of CWB and what organisations can do to eliminate and manage these behaviours in the workplace.

Through this current study the focal point was to better understand the antecedents of counterproductive work behaviour by studying the relationship between specific personality traits, integrity and counterproductive work behaviours. Part of the study included developing a theoretical model to examine the relationship between the different latent variables and hypotheses were formulated and tested. Data gathering was done through a sample of 227 participants, from five organisations in Namibia by completion of an online questionnaire.

The conceptual model and proposed relationships were empirically investigated by using various statistical methods. The methods used was reliability and item analysis on every measurement scale and satisfactory reliability was established. The content and structure of the various constructs was assessed by means of Confirmatory Factor Analysis (CFA). The results confirm a reasonable fit for both the measurement and structural models. Structural equation modelling (SEM) was used to analyse and ascertain the degree to which the conceptual model fitted the data in order to examine the proposed relationships between the various constructs.

The results confirmed that negative relationships exist between conscientiousness and CWB, and integrity and CWB, and a positive relationship between conscientiousness and integrity. However, no empirical support was found for relationships between agreeableness and integrity, emotionality as well as integrity and honesty-humility and integrity.

This study has contributed positively to the existing body of knowledge on CWB, by having looked in-depth into and providing valuable understanding of the relationship between the identified personality traits, integrity and CWB. In addition, this study focused on the implications for the human resources profession in dealing with CWB in the workplace and suggested various interventions HR professionals and leaders could apply to eliminate and minimise CWB. The limitations and recommendations for future research were also discussed and suggestions made.

OPSOMMING

Organisasies, in samewerking met akademiese instansies, het oor die jare gekyk na maniere om negatiewe gedrag in die werksplek te verstaan en intervensies daarvoor te kry, aangesien sulke gedrag oor dekades gewys het dat dit 'n negatiewe uitwerking op die funksionering, groei en volhoudbaarheid van organisasies uitoefen. Teenproduktiewe werksgedrag is negatiewe gedrag wat die optimale funksionering van organisasies belemmer. Hierdie studie fokus dus op die oorsaaklike faktore van teenproduktiewe werksgedrag en wat organisasies kan doen om dit binne die werksplek te elimineer en te bestuur.

Die huidige studie fokus daarop om die oorsaaklike faktore van teenproduktiewe werksgedrag beter te verstaan deur die verband tussen spesifieke persoonlikheidseienskappe, integriteit en teenproduktiewe werksgedrag te bestudeer. 'n Deel van die studie het die ontwikkeling van 'n teoretiese model behels, om die verband tussen die verskillende latente veranderlikes te bestudeer en hipoteses is geformuleer en getoets. Data invordering is gedoen deur 'n steekproef van 227 deelnemers, van vyf organisasies in Namibië, wat 'n elektroniese vraelys voltooi het.

Die konseptuele model en gepostuleerde verwantskappe is empiries ondersoek deur middel van 'n verskeidenheid statistiese metodes. Die metodes wat gebruik is is betroubaarheid- en itemontleding op elke metingskaal, en aanvaarbare betroubaarheid is bepaal. Die inhoud en struktuur van die verskillende konstrunkte is gemeet deur bevestigende faktorontleding. Die resultate het 'n redelike passing vir beide die metings- en strukturele modelle bevestig. Strukturele vergelyking-modellering is gebruik om die mate waartoe die konseptuele model die data pas te ontleed en te bepaal. Dit is gedoen om die gepostuleerde verband tussen die verskillende konstrunkte te ondersoek.

Die resultate het bevestig dat daar 'n positiewe verband bestaan tussen pligsgetrouheid en integriteit en 'n negatiewe verband tussen pligsgetrouheid en teenproduktiewe werksgedrag, asook tussen integriteit en teenproduktiewe werksgedrag. Daar is egter geen empiriese ondersteuning gevind vir die verband tussen insiklikheid en integriteit, emosionaliteit en integriteit asook tussen eerlikheid-nederigheid en integriteit nie.

Die studie het positief bygedra tot die bestaande kennisbasis oor teenproduktiewe werksgedrag, deur 'n in-diepte ondersoek in te stel en waardevolle insigte oor die verband

tussen die geïdentifiseerde persoonlikheidsienskappe, integriteit en teenproduktiewe werksgedrag te verskaf. Bykomend het die studie gefokus op hoe om die implikasies vir die menslike hulpbronne professionele en teenproduktiewe werksgedrag te hanteer, en verskeie intervensies wat menslike hulpbronne prakties en leiers kan toepas om teenproduktiewe werksgedrag te verminder of te elimineer. Die beperkings ten opsigte van die studie asook aanbevelings vir toekomstige navorsing is bespreek en voorgestel is gemaak.

ACKNOWLEDGEMENTS

Above and beyond all, I give all honour and glory to my Lord, God and Saviour for His divine guidance and wisdom to me during this journey. My hope and glory is in you alone my God.

I dedicate this thesis to my dear parents, Motshabi and Wilhelmina Pogisho, for the values you instilled in me and the person you helped me become. Dad and mom, I am so thankful and privileged to be your daughter.

All honour goes to my beautiful family. My dearest love, my husband - Graham. Thank you for having helped me carry the immense load during my studies, where at times you had to be mother and father to our daughters. When I had to pick my study books you were always my helping hand, you are simply the best and I am eternally thankful that God gave you to me.

To my sweethearts, Jerusha Thato, Kayla Dineo and Ava Oaitse. My angels I did this all for you, to set a standard for you to build on. I know and believe you will go beyond what mommy did. Love you always.

To my siblings, my two sisters (Pulcheria & Cynthia) and two brothers (Kagisho & Kgomotso). Thank you for who you are to me and always being my best friends regardless. I immensely appreciate and love you all.

A special, heartfelt and sincere thanks to Dr Bright Mahembe. My dear friend for your continued assistance, patience and guidance during this journey. I am deeply humbled by the person you are and that you put in so much personal effort to assist me. Words cannot express my gratitude Bright!!

Lastly, I would like to thank my supervisor Prof Amos Engelbrecht for your dedication, encouragement and support throughout. Amidst all you were there for me, I am forever thankful for your commitment towards seeing me complete my thesis.

All honour and glory to my God Almighty!!!

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CHAPTER 1

INTRODUCTION

1.1 STUDY BACKGROUND

As counterproductive work behaviours (CWBs) are very prevalent in the workplace, and if left unattended or unresolved these behaviours can become very damaging and costly to organisations and harmful to employee's quality of work life, therefore an acute interest has developed over time within the field of Industrial/Organisational psychology to better understand the causes of CWB and what organisations can do to ease the impacts of CWB or to proactively prevent it in the workplace (Chang & Smithikrai, 2010). Interest has been mounting to study CWB and to better understand what causes CWB and its impacts on the individual and organisation (Sammani, Salamon & Singh, 2014). Thus, the study of CWB has become more imperative because of the financial and wellbeing implications on organisations and individuals.

The construct of integrity as a psychological construct that has an impact on people's workplace behaviour is becoming a more prominent topic within the I/O psychology sphere (Marcus, te Nijenhuis, Cremers, & van der Heijden-Lek, 2016). Integrity testing is used in most organisations to identify signs of counterproductive work behaviour in prospective employees before recruiting individuals into the organisational structure. More specifically, integrity is a vital trait for effective leaders, paramount for trust in organisations, incremental for employee wellness, vital component of productive work relationships and a good and valid predictor of job performance as well as counterproductive behaviour (Engelbrecht, Heine, & Mahembe, 2017; Ones, Viswesvaran, & Schmidt, 1993).

According to Becker (1998) there are predominantly four crucial areas, which validate the value of integrity in the workplace. These are as follow:

- (1) Integrity is a predictor of job performance;
- (2) It is further a determining factor of counterproductive behaviours;
- (3) A central contributing factor of trust; and
- (4) A fundamental trait of effective leaders and organisational success.

Integrity of a person does not only signify a trait linked to exemplary leadership but also a major contributing factor for successful organisation outcomes (Parry & Proctor-Thomson, 2002). They further maintain that organisations that are led and managed in an ethical and consistent manner are more effective and have a healthy and strong organisational culture; low levels of staff turnover; and higher levels of employee effort. Integrity in leadership is a much sought after personality trait being essential for leadership effectiveness (Monga, 2016). A leader's integrity and the way of ethical conduct among leaders has a direct impact on how effective an organisation is run and this has been highlighted and supported by previous literature (Monga, 2016; Parry & Proctor-Thomas, 2002).

The latter discussion signifies the importance of testing, assessing and evaluating integrity within the work/organisational context.

At the corporate level, integrity includes leaders who have carved an organisational climate or culture that portrays consistency, transparency, trust and lasting results. When focusing on integrity at an individual level, it is more than just ethics but really the essence of a person's character. A person's integrity is depicted by traits possessed by the individual that show ethical behaviour, a person that is consistent, thoughtful, compassionate, transparent, honest and ethical. Individuals who portray a high level of integrity are normally people that can be relied or counted on to continuously and consistently do what is right and what is expected of them. These individuals are very dependable and predictable when engaging with others as well as how they perform work and transact on issues. They stand up for what is right, fair, objective, just and acceptable.

Walking the talk, that is what integrity really is all about. Integrity is really about being reliable, consistent, true/honest, morally upright and dependable. Common observations of leaders showing integrity are high authenticity and honesty by communicating the truth, leaders with integrity act with authenticity and honesty by speaking the truth, consistently presenting themselves in a genuine way by showing genuineness, lacking pretence, as well as being responsible for their individual feelings and actions (Peterson & Seligman, 2004). When a leader displays integrity it

is easy for team members to trust and follow such a leader, this makes integrity vital for leaders at middle management level who fulfil their roles through relationship building, reaching consensus with others and networking at all levels with their teams. In many instances organisations often promote employees up their senior ranks lacking the knowledge of whether the person possesses a vital character strength so needed to lead at top-level positions, namely integrity. Many times employees at middle-level management are promoted into higher roles within organisations, without having or developed the level of integrity required to operate at a senior level of leadership.

Integrity testing has become very appealing to employers in modern day organisations, the reason being that counterproductive work behaviours (CWB) have alarmingly increased in the workplace, these behaviours range from employees stealing from employers, sabotaging and destroying company property, wastage of company supplies, loafing at work and making use of company time to perform personal activities or leaving workplace without permission, absenteeism, abusing drugs and alcohol at work, the list goes on. These behaviours are costing organisations astronomical amounts annually either in direct losses, decrease and losses in productivity and insurance costs (Murphy & Lee, 1994). Integrity testing is a definite option to predict CWB with the aim of reducing these behaviours in the workplace, thus integrity testing can be beneficial for organisations. Research has also shown that integrity is one of the constructs of positive psychology (Barnard, Schrunick, & de Beer, 2008). With lesser organisations making use of the polygraph test in the workplace the use of integrity testing has significantly increased to ensure the person fit within an ethical organisation is objectively measured (Barret, 2001)

Research thus far has widely endeavoured in measuring the impact of individual/personal traits on CWB and these findings are significant. Research done in both Western and Eastern domains has shown a strong relationship between employees' counterproductive work behaviours and their individual factors, such as Big-five personality traits, locus of control and self-esteem (Dalal 2005; Marcus, Taylor, Hastings, Sturm, & Weigelt, 2016; Mount, Ilies, & Johnson, 2006). However,

the results from the studies done on CWB gives meaningful insight and information on personality and attitudes that predict CWBs and create a basis for further and future research to expand on (Chang & Smithikrai, 2010).

Reports in South Africa show the increasing trends of costs of counterproductive work behaviours. According to research done by PwC, South African companies have the highest occurrence of cases on economic misconduct or corruption when compared other African and global peers, with more than two in three organisations (69%) indicating that they had been victim to economic crime and misconduct (www.pwc.co.za). The PwC reports further explicate that South African organisations severely suffer from human resources, procurement, financial statement fraud and bribery compared to organisations globally.

Another major form of CWB is absenteeism, which is a major contributing factor to why there is a decrease in South Africa's global competitiveness ratings, with an astounding 500% increase in sick leave since 2001 (<http://pressreader.com>). It is a sad reality that the South African economy loses between R12- to R16-billion annually because of absent workers, this is based on findings by Occupational Care South Africa (OCSA) and Statistics South Africa. Based on findings by OCSA their estimations indicate that on average 15% of staff are absent from work at any day of the week and merely one in three people absent from work are in actual fact physically unwell or sick. Furthermore, in many organisations more than 40% of sick leave certificates are dispensed without a diagnosis (<http://bhekisisa.org/article>). The high number of employees who are falsifying their illness is very worrying and alarming and this is a clear indication that the prevailing trend might be the cause of deeper problems within the work environment that employees are not able to cope with and leading to lack of wellness at work.

Absenteeism has become very costly to organisations amounting to thousands of rands annually, not to mention lost time in production if employees are not managed correctly. Organisations can benefit by implementing wellness programmes to counter

CWB. Surprisingly, South Africa's latest ranking in the Global Competitiveness Index, distributed by the World Economic Forum (WEF), improved by two positions in 2016-17, landing South Africa in 47th position of 138 countries (<https://www.sablog.kpmg.co.za>).

One cannot over emphasise the monetary/financial cost implications of company fraud, theft and corruption (all forms of CWB) in general across organisations globally including South Africa. South Africa was ranked the 61st most corrupt country out of 168 countries in 2015 according to Transparency International, (<https://home.kpmg.com>). Employees who are unhappy, disgruntled or feel unjustly treated at work are prone to engage in CWB and this ultimately impacts the bottom-line of the organisation.

Another escalating and worrisome problem is the ongoing industrial action in South Africa that normally turns violent and destructive, costs organisations in South Africa astronomical amounts annually. Labour unrest in South Africa is a common occurrence and many working hours are at stake because of this, in 2012 alone, 17.3-million working hours were impacted by illegal strikes. The labour department recorded 99 strikes, of which nearly half were illegal or unprotected. From a total of 118,215 workers involved in strikes, 100,847 (85%) were in the mining sector. It is an industry out of control as David Gleason stated it South Africa is at the mercy and grace of trade unions (<https://www.businesslive.co.za>).

It is important to note that people in organisations are not necessarily bad however the problem is normally a bad fit, which integrity testing can eliminate. It is important to ensure that employees have the right skills, training and opportunities to perform optimally. It is well known in today's organisations that Human Resources (HR) in organisation is transitioning to a position of merely being a strategic business partner towards becoming a driver of business success and sustainability (Meyer, Roodt, & Robbins, 2011). It is vital for organisations to proactively and continuously look for red

flags or areas of concern with their employees. Internal and external audits can pinpoint critical ethical concern areas that should be managed within an organisation. In organisations a lot of focus is placed on technical knowledge, qualifications and skills of employees, however the areas of ethical character and behavioural fit are mostly neglected. It is therefore so important that organisations need to cogitate the psychological contract upfront. It is essential that organisations ensure prior to appointing an employee that the employee's values and needs should align with the values and culture of the organisation. It is therefore the role of HR practitioners to assist leaders in probing for character fairly and legally when conducting interviews. Consequently, HR should conduct proper due diligence on prospective employees before recruiting and selecting as to prevent possible damages that incompetence can cause (Deloitte as cited in Meyer, Roodt, & Robbins, 2011).

Personality plays an integral part in why employees engage in counterproductive behaviours and four personality traits that are of significance to be studied are conscientiousness, agreeableness, emotionality and honesty-humility (Ashton & Lee, 2005 & 2006, Lee & Ashton, 2004).

Personality variables have in many cases been used to predict significant behaviours and outcomes. Over the past twenty years large-scale meta-analyses have reported and recorded the universal influence of personality constructs in almost all facets of organisational behaviour (Ones, Viswesvaran, & Dilchert, 2005). Personality traits are lasting character qualities and predispositions of individuals of conducting themselves in specific ways, it is therefore not one single trait. However personality includes an array of a person's individual qualities that differentiate one person from another based on their basic tendencies of how they behave, their thought patterns and emotions/feelings. The nature of personality is displayed by individuals' consistency in behaving or conducting themselves in a foreseeable way regardless of the situation or setting. There are numerous personality traits that distinguish individuals from each, highlighting the unique differences in people (Ones et al., 2005). Whenever individuals reply to single items on personality instruments, they are highlighting aspects about themselves, describing their behaviour, attitudes and character. The personality items

that would typically be measured are thoughts, behaviours, feelings and attitudes of individuals. Normally, items that are psychologically comparable or similar are clustered collectively to formulate certain traits. Traits can also be clustered together to form higher order personality constructs. A person's personality is comprehensively understood as an outline of high and low levels on specific dimensions and facets, as opposed to an average rating on separate or various traits. Overall personality studies and research has greatly evolved and benefited the I/O psychology fraternity as it has developed measures that are reliable and valid indicators of personality through the Big Five and HEXACO Models (Lee & Ashton, 2004).

Spector and Fox (2005) stated that CWB is a response to demanding and stressful work conditions that prompt negative emotions, and personality characteristics play a vital role in CWB and two perspectives have been formed regarding this. The organisational dimension of CWB is individual conduct that oppose the organisations effort of operating in an ethical and transparent way for the best interest of all involved. These CWB are mostly targeted toward to the organisation, however other elements and structures within the organisation are also targeted such as inappropriate verbal abuse of co-workers or harassment and physical harmful or violent acts. Spector and Fox's (2005) definition on CWB focuses more on an employee standpoint in describing CWB encompassing harmful and destructive behaviours aimed at harming others or the organisation. Other forms of destructive workplace behaviours that overlap with CWB are aggression, taking revenge, retaliation, bullying, mobbing and emotional behaviour (Spector & Fox, 2005). It is obvious that CWB corresponds strongly with aggression because the intention to harm others is relatively high. Aggression and CWB are both aimed at harming; only that CWB is mostly acted out in an organisational setting or toward a target in the workplace, directed towards harming, destructing and destroying either subjects or objects within an organisation.

Counterproductive work behaviours are characterised by a disregard for social and organisational regulations, rules, ethics, morals and standards (Matinko, Gunlach & Douglas, 2001). Consequently, counterproductive behaviours can range in intensity and severity from low instances of petty stealing to highly violent acts. Likewise, CWB includes all behaviours at work ranging from absenteeism to violent assaults. Counterproductive behaviour is the outcome of complicated interaction between

individuals and their environment where the person's causal reasoning on the environment and expected outcomes drives the behaviour of an individual (Matinko et al., 2001).

Integrity testing is essential in the corporate environment, because building a positive organisational culture requires individuals with integrity to cultivate a consensus around shared values collectively. It is therefore paramount that organisations and their employees discuss their organisational values collectively and publicly in order to live and promote the values. This allows for continual engagement within the organisation, and the agreement reached by management and employees builds and develops a culture of integrity in the organisation. A positive organisational culture has direct influence on how interpersonal relationships are built and structured in an organisation and fosters a work environment that is high on integrity. This environment promotes employees to be motivated, resourceful and creative, by being proud of their work output as well as collaborating and cooperating with co-workers in creating a positive environment. Furthermore, the culture of integrity influences the behaviours and dealings of the leadership team and the quality of the corporate governance system. The impacts of a positive work environment is that employee morale increases, the workplace endorses positive, ethical and constructive policies, procedures and practices, turnover of employees declines and productivity significantly increases. It also has a positive impact on customer service and relationships, suppliers and vendors as trust is at the centre of these relationships. The executive officers are able to receive valuable direction from the board of directors, ensuring that the culture of integrity covers all stakeholders involved. Organisations that promote a culture of integrity have a tendency to be market and industry leaders, they normally outperform their competitors and maintain steady long-term financial performance. These are obviously organisations that are good to work for, to work with, and to own (Duggar, 2009).

1.2 ANTECEDENTS OF CWB

It is vital for organisations to understand and comprehend the determinants of CWB in order to know how to identify and manage it within the workplace. Failure to do so can result in costly and negative impacts for organisations. Extensive research has been done on CWB, most CWB fall in one of two categories, Individual CWB (CWB-I) or Organisational CWB (CWB-O). Peng (2012) looked at CWB among knowledge workers with a Chinese sample group. Various antecedents impact CWB, two very distinct ones are personal variables (e.g. personality, integrity) or situational variables (e.g. organisational injustice). Researchers are moving towards focussing on a combination of both personal and situational variables as predictors of CWB as one approach cannot fully explain or portray the phenomenon of CWB. In most cases employees engage in acts of CWB because of the following aspects:

1.2.1 Individual/Personal Antecedents

There are characteristics or traits within an individual that can be a contributing factor for a person to engage in CWB, below the major antecedents of CWB are discussed:

Personality: Personality can potentially impact the CWB process (Kozako, Safin & Rahim, 2013). Conscientiousness is the best and most robust predictor of CWB (Dalal, 2009; Giordano, Ones, & Viswesvaran, 2018). Research has shown that conscientiousness and facets related to it are the best predictors of CWB. Thus, people who score low on conscientiousness would most likely be involved in CWB (Dalal, 2009). Individuals with a Type A personality are likely to engage in CWB because of their tendencies to be ambitious, highly competitive, achievement-oriented, overly-involved and being workaholics as they are very involved and absorbed with their work and continuously trying to achieve more in less time (Vardi & Weitz, 2003).

Another personality trait that may affect CWB is Machiavellianism, which is an extreme form of unethical conduct, people who engage in hidden agendas and unethical transactions. These individuals are inclined to use their interpersonal relationships unscrupulously and betray others for self-advancement (O'Boyle, et al., 2012).

Integrity: Integrity testing was initially developed to predict CWB (Marcus et al., 2016). Integrity is where there is consistency and coherence in the conduct, behaviour and actions of an individual (Shahid, 2013). In order for organisations to maintain a healthy organisational climate, it is important for employees to obey and comply with company policies, norms and procedures to ensure that the organisations objectives are achieved. Failure for employees to live up to this, by engaging in CWB can lead to the organisation's integrity being at risk and even exposed, which can be damaging to the reputation and progression of the organisations. Behaviours that are negative in nature such as theft, lateness, abuse and destructing company property can put financial pressure on the organisation and negatively impact the integrity of the organisation. It is therefore important for employees to consistently conduct themselves with integrity in all their dealings.

Job attitude: job satisfaction and organisational commitment: It is generally perceived that any employee would flourish in an environment where work conditions are satisfying, interpersonal relationships are healthy, work procedures and processes are well understood and job outcomes are positive. However employees negatively react towards dissatisfying work conditions and work environments that allow workplace injustice, and they do so by committing or engaging in behaviours that are harmful/destructive toward the organisation and other employees in the form of CWB and such employees generally show little commitment towards the organisation (Dalal, 2009). Research by Vardi and Weitz (2003) show those individuals who show professionalism and are committed towards their work and organisation negatively correlates with CWB. Therefore, job satisfaction can be a major contributing factor as dissatisfied employees can engage in unethical choices or behaviours.

Locus of control: A person's locus of control, whether internal or external, also plays an integral part whether they will engage in CWB. Internal locus of control is when an individual ascribes life events toward themselves or internally, while external locus of control is when an individual points it to an external source like influence of powerful people, gender, age or education. Individuals with an external locus of control are

more likely to engage in CWB than someone with an internal locus of control (Martinko, Gundlach, & Douglas, 2001).

Positive and Negative Affect: Individuals with an inclination towards negative affect are more likely to engage in CWB. Spector and Fox (2002) found through their research that positive affectivity is closely linked to organisational citizenship behaviour (OCB) while negative affect is a cause of CWB.

1.2.2 Organisational/Situational antecedents

Similarly there are factors or characteristics within an organisation that can promote CWB among employees, below the major antecedents are discussed:

Organisational Justice: Perceived organisational injustice will definitely prompt CWB as this impacts employee's job satisfaction and organisational commitment levels. As previously mentioned by Dalal (2009) a negative work environment and unjust work conditions can have a negative impact on employees and promote involvement in CWB and a decline in organisational commitment. Employees who perceive unfairness in the workplace normally develop strong negative emotions that leads to retaliation that results in covert reactions. A bureaucratic work environment can significantly instigate workplace deviance, reason being that communication gaps are created between management and lower level employees. This in turn impacts employee morale and their commitment towards the organisation, this type of environment is constructive ground for counterproductive work behaviour (Jelinek & Ahearne as cited in Nasir & Bashir, 2012). Consequently, CWB is the intricate interface between a person and the work environment in which the person's fundamental reasoning of their environment determines a person's behaviour. Deviance implies when a person's beliefs, attitudes and behaviours differ in nature from the conventional or usual standards (Nasir & Bashir, 2012)

Organisational policies, structures and procedures:

Many organisations are still working on traditional hierarchical structures that reinforce power differences. Organisations exercising a top-down management style and where bureaucracy is prevalent is also breeding ground for CWB (Vega & Corner as cited in Kidwell & Martin, 2005). The pervasive practice of CWB in the workplace is linked to the absence or lack of moral leadership in an organisation, allowing the continuation of unethical, destructive and harmful behaviour. Managerial skills can obtain great success for companies but if moral leadership lacks it can lead to an organisation's failure and damaging the organisational climate. Whenever leaders display or conduct themselves in unethical ways it portrays that CWB is allowed in the organisation and subordinates tend to imitate or conduct themselves in the same destructive manner as the leader (Appelbaum et al., 2007).

Employees may feel anger and frustration because of how things are done in an organisation, which leads to interpersonal conflict, role stressor and role conflict, and perceived injustice (Spector & Fox, 2002). The use of technology in workplaces rising, impacts of globalisation and socio-economic changes in the current work environment is continuously changing and this gives rise to new forms of CWB in the workplace like credit card fraud, hacking virus attacks, where individuals and organisations are targeted leading to high financial losses but also reputational damage (Furnham & Taylor, 2011)

Organisational climate/characteristics:

Organisational culture is the prevailing climate of an organisation, portraying how ethics are embedded in organisational artifacts, values and assumptions, depicting the overall functioning of the organisations. It also creates social pressure for employees to act in specific ways, and it is greatly influenced by leaders/managers, because leaders' influence ethical behaviour, as they set the tone at the top that ultimately cascade to all levels in the organisation, building either a positive or negative organisational culture life (Kidwell & Martin, 2005).

Leaders are role models of the right behaviour in the workplace, they have to continuously integrate ethics in the work environment, as well as living out the values of the organisation as employees look up to them. Failure or oversight to do so can create avenues for CWB, like late-coming, absenteeism, wrong behaviour that goes undisciplined and such actions become the norm and ultimately the culture of the organisation. Transformational, charismatic, ethical and authentic leadership styles promote building a healthy and transparent organisational culture and climate. Work environments where power is used inaptly, workplace bullying by demoralising an individual seen as vulnerable, outsider or a misfit can have detrimental effects on the victim but ultimately also on the overall climate and performance of the organisation. Group norms promoting a certain group think and engaging in rigid ways of thinking are dangerous signs of CWB, like theft and fraud seen as normal within the group, promoting or tolerating destructive behaviours (Kidwell & Martin, 2005). There are various factors that cause or lead to people committing CWBs, as personality alone is not the only contributing factor as why people engage in CWB, however the work environment also plays a vital role as previously indicated. Thus a combination of personality and work environment or situation are best predictors of CWB (Peterson as cited in Appelbaum, Iaconi, & Matousek, 2007). Other than workplace and personality variables, additional contributing characteristics of CWB in organisations is unfair or unjust treatment, the prevailing organisational culture and climate, as well as supervisory behaviour (Caruanaas in Appelbaum et al., 2007).

1. RATIONALE OF THE STUDY

The integrity of an employee is most likely the most intricate personality construct to measure in personnel psychology (Fine, Nevo, & Hemi, 2012). In today's turbulent work environment, integrity has become a vital job requirement for various roles and for different industries. Integrity is also an essential element of most organisation's values and a vital part for its success. It is therefore important for organisations to assess prospective employees' level of integrity through personnel selection as a predictor of job performance and to see the likelihood of an employee engaging in CWB.

The measurement of integrity has been growing steadily as well as the research of the construct, with more evidence emerging on the usefulness of integrity testing for screening out job applicants with risks towards future engagement in counterproductive work behaviours (Ones & Viswesvaran, 2001). As this study will highlight the negative consequences of CWB and the harms that may occur because of CWB, which can impact an organisation's financial standing considerably, thus organisations must have a distinct interest in ensuring reduction and elimination of CWB in the workplace. CWB such as theft, sabotage, vandalism, harassment, fraud to mention a few, can be detrimental for any organisation specifically hampering the profitability and sustainability of the organisation. Therefore the use of monitoring systems, controls, risk management systems and proper supervision and leadership can help eliminate the prevalence of CWB.

The aim of this study is to focus on the relationship between personality, integrity, and CWB. As the prevalence of CWB is continuously increasing in different institutions, through research of this nature a better understanding of the construct is created in order for organisations to develop the right interventions to counter and deal with CWB is imperative, as highlighted by Giordano, Ones and Viswesvaran (2018), CWB cuts across different spheres and not only within the workplace, it is prevalent in all aspects of life, thus the importance of researching, testing and understanding the construct is essential.

Furthermore the importance of personality is highlighted profoundly in this study as it plays an integral role in predicting CWB in employees. People with certain personality traits are more prone to engage in CWB based on how high or low they score on conscientiousness, agreeableness, emotionality and honesty-humility (Lee & Ashton, 2004, Spector & Fox, 2005). As such a person's personality can be a predisposition in their proneness to engage in CWB, as well as other environmental or situational factors, and this in turn can have an impact on the person's level of integrity in the workplace.

Integrity is a vital trait at all levels within an organisation to ensure that the right organisational culture is built and ethical conduct is promoted within the organisation. The central aspect of integrity is commitment and coherence to sound moral principles

(Monga, 2016). The various construct/variables researched in this study provide a platform to better understand how personality and integrity influence CWB, and for organisations or institutions to comprehend the implications that if the unique relationship between these variables is not managed properly, CWB could prevail. However, on the other hand, the aim is exploring ways on how to manage CWB for the improvement and enhancement of organisational functioning.

2. RESEARCH-INITIATING QUESTION

Flowing from the introduction and foundation of this study the research-initiation question or enquiry is to examine:

What impact does individuals' personality have on their integrity and do these factors play any role in someone's engaging in CWB?

3. RESEARCH OBJECTIVE

Counterproductive work behaviours have become the norm in most organisations, influenced by various factors, specifically the interplay between individual and organisational factors discussed above. Therefore, the study of CWB has become paramount in most organisational settings to sustain productivity, profitability and ensuring that all resources within the organisation are preserved and maintained for overall organisational growth. Thus to identify the factors that contribute to occurrence of CWB, a comprehensive and systematic evaluation of the factors is required. Therefore the objectives for this study are:

- To identify the main antecedents of CWB
- To formulate and empirically evaluate the structural model describing the relationship between CWB and the identified antecedents.
- To examine the absolute and comparative fit of the measurement and structural models
- To analyse the meaning and importance of the hypothesised relationships in the model
- To propose recommendations for future research
- To highlight implications for the Human Resources profession

4. OVERVIEW OF THE STUDY

Chapter 1 - giving a brief introduction to the causal relationship between personality, integrity, and counterproductive work behaviour linking the impacts of these constructs on the individual, team and organisation at large within a work setup. This chapter also gives a brief framework on the reason or rationale of this study, antecedents of CWB, the research-initiating question and objectives of this study.

Chapter 2 - presents a comprehensive review of the literature, with the main concepts of the study being discussed in detail. Definitions for the selected personality traits, integrity and counterproductive work behaviour are elaborated on. The chapter proceeds to the hypothesised relationships between the constructs and concludes with the construction of a theoretical structural model developed on the basis of the literature presented in the chapter.

Chapter 3 - outlines the research methodology. This entails a comprehensive description of the research design, the hypotheses, the sample and the data collection procedure. The choice of measuring instruments for each of the variables considered in the study is described. Furthermore, the statistical techniques used to analyse the data are discussed.

Chapter 4 - presents the research results. The main findings of the study are presented in this chapter. The data analysis is discussed in detail, as are the results of the analyses and testing of the proposed hypotheses.

Chapter 5 - the final chapter, discusses the general conclusions drawn from the research. The research results of the hypotheses are interpreted and discussed, the limitations are addressed and suggestions for future research are made. Finally, managerial implications and concluding remarks are presented.

CHAPTER 2

LITERATURE STUDY

2.1 INTRODUCTION

Chapter 1 looked at the purpose for this study, which focused on the effect of integrity and selected personality traits (i.e. conscientiousness, emotionality, agreeableness and honesty) on an employee's propensity to engage in counterproductive work behaviour (CWB).

This chapter offers a detailed analysis of the various theories and concepts in the literature used in this study that aids in explicating the need for this study. The various constructs are thoroughly deliberated on in relation to their meaning and assessment. In conclusion, the focus of this chapter is on developing a theoretical model based on the causal relationships among the latent variables of CWB, integrity and selected personality traits.

2.2 DEFINING COUNTERPRODUCTIVE WORK BEHAVIOUR

CWB focuses on behaviours of employees that can possibly be destructive or damaging to the organisation and fellow employees. CWB includes actions such as stealing, damage of equipment or resources, verbal abuse, working slowly, dishonesty, being uncooperative and causing someone bodily harm (Penney & Spector, 2005). Counterproductive work behaviour (CWB) can have detrimental effects on an organisation's performance. This makes it important to take counterproductive work behaviours into consideration when hiring new employees and when implementing human resource functions. There are various factors that can predict whether someone is likely to engage in counterproductive work behaviours, in this regard personality traits such as conscientiousness and self-control give an indication pertaining to whether an individual is likely to engage in CWB or not.

It is paramount that one understands the meaning of CWB before further exploring the CWB construct. There are a number of definitions for CWB, in this study a few of these will be used to deepen the understanding of this term. CWB are behaviours that produce outcomes that work against the benefits of an organisation. Employees voluntarily and consciously decide to take part in CWB. These behaviours vary from playing unpleasant tricks on others, victimising or verbally abusing a co-worker, faking documents (especially financial information), destructing others' work/effort and stealing company time, resources and equipment. In general, CWBs are detrimental and destructive to any organisation in all aspects. This results in hampering the overall functioning of the organisation, damaging of company property, harming or offending employees in a work setup and thus decreasing their efficacy and efficiency (Chang & Smithikrai, 2010).

People engaging in CWBs undoubtedly disregard organisational standards, and such actions have a negative impact on the overall functioning of the organisation and leads to organisations deviating from its ultimate purpose and mission. Albeit more tough to evaluate, the adverse psychological effects of CWB can negatively impact on employee motivation, lead to higher rates of staff resignation and nonattendance, decreases the overall efficiency and effectiveness of employees which in the long run can lead to business failure (Hoel, Einarsen & Cooper in Chang & Smithikrai 2010).

2.2.1 THE TYPOLOGIES OF CWB

Counterproductive work behaviour or as some call it the “dark side” of behaviour within the workplace can be separated into two types, namely interpersonal deviance or counterproductive work behaviour (aimed at individuals and includes bad mouthing someone, stealing or violence against colleagues) and organisational deviance or counterproductive work behaviour (aimed at the organisation and includes property damage, reporting wrong doing in the organisation through whistle blowing, stealing company time). Additional forms of CWB are also targeted against company manufacturing systems, political as well as individual hostility (Furnham & Taylor, 2011). Employees' job dissatisfaction, distributive justice and the individuals' conscientiousness are strong predictors of CWB directed against the organisation.

However, interpersonal conflict and a person's level of agreeableness predicted more strongly interpersonal counterproductive work behaviours (Berry, Ones & Sackett, 2007; Fox, Spector & Miles, 2001).

Interpersonal-focused CWBs (ICWBs) still resides under one universal abuse category, basically depicting behaviours targeted toward colleagues and others causing either bodily or psychological destruction, for example, playing a trick on someone or physically attacking someone (Spector, Fox, Penney, Bruursema, Goh & Kessler, 2006). Interpersonal behaviours are focused at the victim's physical or mental well-being but not the individual's work or job performance, thus the CWB action will not necessarily be directed toward the work of a person but the individual personally (Ho, 2012). It is imperative to differentiate between task focused ICWBs and person focused ICWBs, as it provides a more holistic and meaningful understanding of ICWBs by highlighting the individual features of each and whether there might be similarities or differences. One would give an incomplete and limiting interpretation if emphasis is placed only on the person-focused ICWB such as abusive conduct. Therefore, creating an integrated view of ICWB is beneficial to better comprehend the various predictors and outcomes of ICWB, and analysing how these behaviours when compared to other variables can have different outcomes (Bowling & Gruys, in Ho, 2012). Ultimately one would like these behaviours to be dealt with constructively for optimal organisational functioning, it is hence paramount to understanding what drives these behaviours so that incidents prompting such behaviour can be minimised to eliminate the negative impact on organisational functioning.

Fox et al. (2001) linked justice more to CWB targeted toward organizations, and interpersonal conflict largely to CWB targeted toward people. Conflict with co-workers was more likely to result in CWB directed toward people, although an encounter with superiors can be seen as CWB aimed towards the organization.

2.2.2 DIMENSIONS OF COUNTERPRODUCTIVE WORK BEHAVIOUR

Spector et al. (2006) identified five dimensions of CWB, namely abuse against others (abuse can be targeted against others, by engaging in destructive behaviours toward

co-workers with the intention of causing physical or psychological injury through bullying a person, making inappropriate remarks, disregarding the person or disrupting a person's freedom to work efficiently), production deviance (employees intentionally fail to complete a job or tasks effectively), sabotage (destroying or damaging company property), theft (stealing company money, goods or services for self-gratification or gain) and withdrawal (behaviours that limit the time working to less than is expected by the organisation).

Furthermore, Ho (2012) highlights that individuals that are counterproductive, can be divided in two different groups namely task-focused, these individuals intentionally aim at disrupting another person's work performance by interfering their work and to make them look bad or not providing them with the necessary resources/information to perform their work optimally. Another group of individuals who are counterproductive is the person-focused individuals who mainly focus on inhibiting a person's physical or psychological well-being, by becoming physical with the person, embarrassing them in front of other or making them look bad in the presence of others. This difference has been highlighted in the studying of interpersonal citizenship behaviours, where these behaviours are segregated into task-focused, characterised by individuals who positively and openly support their colleagues' task performance, and person-focused behaviours that support and maintain sound and productive social relations in an organisation (Settoon & Mossholder as cited in Ho 2012). The latter type of abuse consists of destructive and vicious behaviours aimed at co-workers and others that cause either physically or psychological harm by creating damaging fears, foul remarks, overlooking the person, or destabilising the person's ability to work effectively. All these behaviours are forms of open aggression, even though physical aggression in the workplace is sporadic (Fox et al., 2001). Research in the sphere of counterproductive behaviours, especially in areas of studying aggression and social undermining, has also recognised that ICWBs can encompass behaviours exhibiting abuse beyond the traditional abusive behaviours that are person-focused in description, to behaviours that are more task-focused. The literature on aggression has highlighted three factors that mainly label aggressive behaviour, namely expressions of antagonism (e.g. looking at a person in a disgusting way or making indecent gestures to someone); explicit aggression (e.g. physically attacking another

person; damaging or robbing the organisation's or other workers' property); and obstructionism (e.g. intentionally hindering someone's work, deliberate work slowdowns) (Neuman & Baron, 1998).

Obstructionism mainly incorporates task-focused ICWBs, focusing largely on behaviours that hinder an individual's ability to perform their work optimally or are hindering the organisation in achieving its goals (Neuman & Baron, 1998). CWB can also be regarded as a form of protest behaviour in which individuals and groups try to bring to attention or utter their dissatisfaction with what is happening in an organisation (Kelloway, Francis, Prosser & Cameron, 2010). It is vital to highlight that what may be seen as counterproductive behaviour by an individual or group towards the organisation, may be experienced as productive or meaningful for the individual or group to bring to attention how they feel about certain issues in the organisation. Obstructionism also focuses on behaviours targeted at the organisation, these behaviours include deliberate work go-slows, work to rule, misuse of sick leave days and procrastinating actions on paramount organisational matters. However according to Ho (2012) obstructionism includes behaviours that are task-focused in nature, it does not really pin point towards who such behaviour is aimed at; whether towards the organisation or specific worker (Ho, 2012).

People with CWB display a range of behaviours that can ultimately impact the functioning of an individual, group or the organisation in some way or another. The behaviours exhibited range from withholding effort (such as shirking, free-riding and social loafing) to the use of negativity to express pessimism, anxiety, insecurity and irritating and deviant behaviours such as taunting, hurting and embarrassing others in their group. Behaviours affecting the organisation negatively include theft, vandalism or sabotage. This is becoming prevalent in many organisations in South Africa, especially with the increasing number of strikes taking place across the country. Consequently, these behaviours have a ripple effect on the individual, the group, organisation, community and ultimately on the economy of the country. Thus one can see the possible detrimental impact if CWB is not managed or dealt with promptly.

As discussed in the preceding section counterproductive work behaviours encompass a group of behaviours that occur in and around organisations. They are behaviours that an individual carries out with the intention of harming the employees, the organisation and/or its stakeholders. It also includes various negative behavioural conducts such as absenteeism, accidents, theft, sabotage, and white collar crime that have a damaging impact on an organisation and employee.

Based on the research of Salgado (2002) one can infer that CWB can be divided into two dimensions, target and severity. Behaviours that are targeted at the organisation can range from minor forms of counterproductive work behaviour such as taking unnecessary breaks, leaving early and intentionally working slow, to relatively severe forms such as sabotage and stealing. Behaviours targeted at other employees can range from relatively minor acts of gossip, favouritism and blaming co-workers to more serious acts such as sexual harassment, abuse and workplace aggression in terms of severity.

It is clearly observable that the study of CWB is a growing field as one can observe from the numerous studies that were done to better understand this construct (Penny, Hunter & Perry, 2011). Penney, Hunter and Perry (2011) analysed the conservation of resources (COR) theory to elucidate the possible benefits of CWB. CWB can be enticed by hostile intentions (e.g. aimed to respond towards a provoking situation where inflicting injury is the key objective), however CWB can also be enticed by instrumental intentions (e.g. harm is exerted or imposed to acquire some other desired outcome). Thus, the distinguishing feature between hostile and instrumental aggression is that the former is reactive and heated (e.g. includes strong destructive feelings), whereas the latter is proactive and cold (Neuman & Baron, 1998).

The predominant application of COR in predicting psychological strain (e.g. emotional exhaustion) has seldom been studied or applied in predicting behavioural strain. Resource deficiency which is mainly caused by psychological strain is different from behavioural strain (e.g. CWB) where an employee purposefully use resource investment tactics to tackle perceived stressors or to reach their objectives at work

(Krischer, Penney, & Hunter, 2010). The COR theory upholds that individuals are driven to acquire resources as well as to avoid resource loss. Krischer et al. (2010) established that employees who experience low levels of distributive justice, are the ones who were more likely to be involved in production deviance like intentionally working at a slow pace or incorrectly and withdrawing from their work (e.g. departing earlier from work than permitted) experienced less emotional exhaustion compared to employees who abstained from such behaviours. Tunstall, Penney, Hunter, and Weinberger (as cited in Penney et al., 2011) did a qualitative inquiry on CWB by asking participants to illustrate an occurrence in which they performed a CWB act, which included the forgoing situation, emotions and the outcome. The results revealed that individuals who expressed interpersonal CWB for instance shouting at or insulting a colleague felt positive after such an encounter as the results showed that the initiator benefited from such an encounter, their productivity increased and in some instances the relationship even improved almost as often as negative outcomes which amounted to 34% and 37% respectively. Therefore, coherent with the COR theory, these results imply that employees most probably leverage CWB to reserve resources and reduce exhaustion or to get the necessary aid, information or required resources from colleagues. Thus CWB maybe vital in encouraging a desire to attain work goals or to lessen psychological strain or both.

For the purpose of this study, CWB can be conceptualised as deliberate behaviour that acts against the welfare and benefits of the organisation.

2.3 DEFINING INTEGRITY

The term integrity accurately means a condition of being untouched. John Beebe emphasised that the term Tag, of Sanskrit roots, is a game meaning to touch or handle. Another term namely Integ infers not to be touched or handled (Beebe as cited in Baumann, 2013). In the Latin language the word integer implied new, undamaged, virgin, complete or in one piece. Nonetheless over time, the term integrity has been widely used in different contexts and still preserving its principal meaning of being uncontaminated and whole in character (Baumann, 2013).

Integrity encompasses a person's entire moral character and has a specific position on honesty in common transactions, transference of property and actions with others (Webster as cited in Baumann 2013). Thus, integrity is a word that explicitly focusses on the ethical trustworthiness in human relations and interactions rather than on assessing an individuals' moral nature. The moral notion of integrity has become more prominent in life today, as the moral significance of integrity, specifically uprightness has exceeded the non-moral notion of completeness, which actually is not a surprise. In other languages, words with similar meaning or connotation as integrity are used to classify people who display morally uncontaminated behaviour and people who by all means refrain from bargaining with their moral commitments (Baumann, 2013).

According to Six, Bakker, and Hubert (2007) mainly two elements are highlighted namely the consistency or completeness viewpoint lacking an overt moral facet and secondly, the element that distinguishes between right and wrong is called the moral perspective which involves a moral component. In terms of the first element (consistency perspective), integrity is viewed as encompassing wholeness or completeness and signifying the consistency and coherence of values and principles. However, this perspective lacks what is called a moral filter. The remarks and actions of a person must go through a moral filter; therefore integrity is more than only does what a person says (Brenkert as cited in Six et al., 2007). Integrity basically focuses on a person's ability to create equilibrium between the basic drives of integrity (moral compass and inner drive) and a person's ability to operate with an increased or decreased sense of integrity (Barnard, Schurink & de Beer, 2008). Thus, a person's moral compass affects a person's inclination to be grounded in their values, beliefs and principles. An individual with a moral compass that is connected to behaviours that depict integrity implies that a person has to internalise integrity-related values such as having respect and empathy for others, having a positive outlook on life, maintaining an internal locus of control, and having a strong determination to live a meaningful and purposeful life.

From the above, one depicts that the consistency viewpoint lacks a moral facet. Morality plays a vital role in distinguishing between individual and societal morality as

these tend to conflict with each other. Social morality are moral principles that people normally obey to and believe that everyone else also adhere to and are regarded as objective or impartial (McFall, as cited in Six et al., 2007). On the other hand, individual morality is a set of norms or vows a person obeys, though not adhered to by everyone else and are not considered as impartial. Thus, integrity turns out to be a personal quality with societal strings attached to it.

Integrity means different things to different people, and this makes defining the term so intricate. Palanski and Yammarino (2007) maintain that research in the field of integrity lacks consistency in clarifying the term. This has led to misperception and differences about the term, which in turn has hampered the development of theoretical models explicating the cause and effect relationships of integrity as well as further empirical tests for these relationships. The prevailing disagreement is to determine if integrity describes constricted ideas of wholeness or consistency and if it is worthwhile to describe integrity more broadly to include aspects such as ethical, authentic, morally apt behaviour or character. As previously indicated, the term integrity is derivative from the Latin word *integer*, implying completeness or wholeness. A common way to describe integrity is to refer to the frame of a ship, denoting that the body is watertight (Palanski & Yammarino, 2007). When using integrity to describe a person, one would like to observe an over-all consistency of specific characteristics within the person such as the person's moral standards, values, beliefs, opinions, words and conduct. The survival of organisations in these turbulent economic times necessitates that leaders display authenticity and integrity and this is also becoming more prominent in the fraternity of industrial psychology, as integrity in leadership is seen as creating a strategic and competitive advantage for organisations. The business man Warren Buffett looks for three vital and important qualities in any new or potential recruit, these are integrity, intelligence, and high energy, adding that "if you don't have the first, the second two don't matter" (Telford and Gostick as cited in Grover & Moorman, 2007).

Integrity can be categorised into five common groupings, namely completeness, regularity of words and actions, stability in adversity, being true to oneself and moral/ethical conduct (Palanski & Yammarino, 2007). According to Grover and Moorman (2007) the core of integrity is the logic of consistency or similarity between

seemingly different components. When a person has integrity, it means that different aspects of the person fit coherently. Integrity is a culmination of an individual's own values, everyday behaviours and basic personal objectives. The term integrity signifies a state of completeness but it is also an all-encompassing multidimensional term which includes many facets. Therefore when used in this manner integrity is almost the same as character. The use of wholeness to describe integrity is focused on giving an overarching view of a person rather than explaining a fundamental element. Thus, the notion of integrity as wholeness represents an overall constancy of a person's conduct, views and feelings regardless of the time and circumstances a person may find him/herself in. Hence, the complete or whole person is regarded rather than only certain aspects of the person. Becker (1998) defined behavioural integrity as persons conducting themselves based on ethically acceptable principles. Therefore, individuals who have integrity are expected to conduct themselves the same regardless of time and circumstances as they are led by a fixed set of moral values.

Integrity forms an integral part of how companies are supposed to be led and managed and is mainly displayed through a company's values. It is therefore peculiar to imagine any organisation that does not consider integrity to be an important value for succeeding in the market place. Consequently, integrity is paramount when selecting the right candidates for a position through personnel selection as it is a valid predictor of job performance when aligned with job capabilities. It is therefore vital for organisations to consider assessing the integrity of potential employees to ensure the right person job fit (Fine, Nevo & Hemi, 2012).

The development of measuring integrity has also received criticism, specifically criterion studies on integrity and job performance. The factors that have been largely criticised is the construct validity of integrity instruments in criterion studies (Cullen & Sackett, 2004). In addition, they maintain that construct validity for integrity continues to be complex, even though extensive research has been done over the years. Many still see integrity as a very unclear, wide-ranging and ill-defined term even though it is of utmost importance in the workplace (Becker, 1998). Integrity assessments have been developed based on numerous multi-dimensional descriptions of the term, which was

a combination of different personality characteristics, attitudes and values (Cullen & Sackett, 2004)

2.3.1 THE CONCEPTUAL FRAMEWORK OF INTEGRITY

It is with this in mind that it was essential to develop a conceptual framework on integrity. Barnard et al. (2008) derived from their study that there are two basic drives of integrity, firstly the moral compass and secondly inner drives. A person's moral compass is defined by possessing and living by a specific set of fundamental values and principles. In their view, a vital determinant of integrity is the circumstantial nature of the moral compass and conduct that is driven by a person's inclination to behave based on their adopted principles, opinions, customs and ethics that embodies a person's moral compass (Barnard et al., 2008). In addition, integrity necessitates a personalised set of values and principles that a person lives and acts out as norms and standards that dictates a person's behaviour and how decisions are made and this ultimately makes up a person's moral compass. On the other hand, a person's inner drive focuses on connecting integrity to a person's intrinsic desires, ambitions, wants and objectives. The inner wants, needs and ambitions constitutes the motivational forces for accomplishment, advancement and hard work that underpins integrity (Barnard et al., 2008). In contrast, at times a person's desires and ambitions can entice one in acting out in ways that do not portray integrity but rather self-centred and egotistical behaviours, thus people who show lack of integrity can be seen having self-serving agendas and looking out for their personal interest. The person's inner drive is mainly focused on operating without integrity but merely for self-increase or gratification. Integrity is motivated by an individual's own motives and standards encompassed in the person's inner drive and determined primarily by their moral compass (Barnard et al., 2008)

Authenticity apart from understanding the moral compass and inner drive of an individual it essential when studying integrity. When is person is functioning authentically is implies that the person is predominantly displaying inward-focused (internal locus of control) behaviours that shows if the person is true to him/herself. On the other hand, behavioural integrity is outward-focused (external locus of control) denoting how a person reflects on others' views aligned to their words and deeds

(Leroy, Palanski, & Simons 2012). Being authentic means that one lives a life of being true to oneself, being unpretentious, upfront and honest to oneself. A person's authenticity can manifest both at interpersonal and intrapersonal levels. The characteristics of displaying interpersonal authenticity is when a person show no pretentious behaviour, showing lack of having hidden or concealed intentions when engaging with others. Intrapersonal authenticity centres on being true to one's inner drive and ethical values as well as taking into account these two characteristics when making decisions. When people are allowed to voice their inner commitments, inherent interests and moral values, authenticity is demonstrated

Furthermore, there are two functions of integrity, namely cognitive and affective integrity. The cognitive purposes of integrity consist of moral intellect and self-awareness. Integrity also pertains to the ability of knowing and understanding the difference between right and wrong. One's reflection on how one behaves based on personal standards and ethics and the applicability of these in certain situations suggest cognitive processes (Barnard et al., 2008). Moral reasoning is an integral part of integrity, focusing on a cognitive facet that aids a person to comprehend the importance of acting morally and maintaining a good character as well as giving precedence to personal values (Lickona as cited Barnard et al., 2008). Consequently, the thought process of continuously linking and bring into line personal and universal accepted standards or morals indicates a person's self-knowledge and self-understanding. Hence, the persons are bound to behave in a consistent manner because they are knowledgeable and conscious of who and what they are, and are able to cognitively arrange their preferences. Self-reflection is vital for development of integrity, continuously looking at oneself to ensure that there is congruency with one's actions, behaviour and values within the moral compass. This is not always an easy process but the ability to self-reflect continuously promotes integrity.

Emotional aspects of integrity include conscience and self-respect. The conscience is evaluative in nature, has the primary role of assessing one's behaviour against the moral compass, and when one does not act with integrity the resultant is undesirable or bad feelings (Barnard et al., 2008). The conscience is not only an evaluator of behaviour but also a proactive motivator and evaluator of ideals a person desires to

uphold. Another component is the self-respect of a person relating to integrity. This implies a coherent and optimistic position of self; this is portrayed with being content with oneself even when a person is cognisant of apparent strengths and limitations. Furthermore, according to a study by Barnard et al. (2008), competencies of integrity include dissimilar and related conducts that give detail on integrity as depicted in the conceptual framework for integrity (see Figure 2.1). In addition, the development context of integrity has an influence on how integrity evolves and develops in a person. Some views in the study states that integrity development is deeply rooted in one's upbringing, however, an opposing view maintains that integrity never ceases to develop. A person's integrity can be viewed as developmental and comparative in nature as it is moulded during the person's life and it is determined by the person's environment or context (Barnard et al., 2008). This framework is essential to understand integrity within the work or organisational context.

Significant progress in the field of integrity assessment has been achieved over the years to measure integrity of potential job incumbents. The two main methods are overt and personality based integrity tests. Integrity tests have been formulated to question or explore job applicants' attitudes and opinion concerning CWB, these tests are typically known as overt tests and are different from personality based integrity tests aimed at assessing the psychological attributes focusing on traits like conscientiousness, agreeableness and emotional stability (Sackett, Burris, & Callahan, 1989). On the other hand, overt integrity assessments evaluates an applicant's attitude and intents in relation to CWB. Overt integrity test focusses on measuring how applicants are likely to justify untruthful or fraudulent actions or behaviour, evaluate how content a person is at carrying out and succeed in getting away with untruthful actions and behaviours, their views on whistle-blowing and getting wrongdoers to admit when they have committed a dishonest act (Averbeck, 2012). According to Ones, Viswesvaran & Schmidt (1993) overt and personality-based integrity assessments have similar predictive validities, however overt test gave more account of CWB than the traditional Big Five Scale. In the workplace the use of overt integrity tests is more common and the foundation of tests are based on the attitude-behaviour theory, where a person that believes CWB is permissible or being accepting of such behaviour is thought of as a greater risk to conduct such actions themselves

(Lee, Ashton, Morrison, Cordery & Dunlop, 2008). However, covert integrity tests are resultant from a wide-range of personality assessments, where conclusions about a person's integrity is drawn from various measures that deal with social conformity, controlling one's urges, risk taking conduct and trouble submitting to authority (Averbeck, 2012).

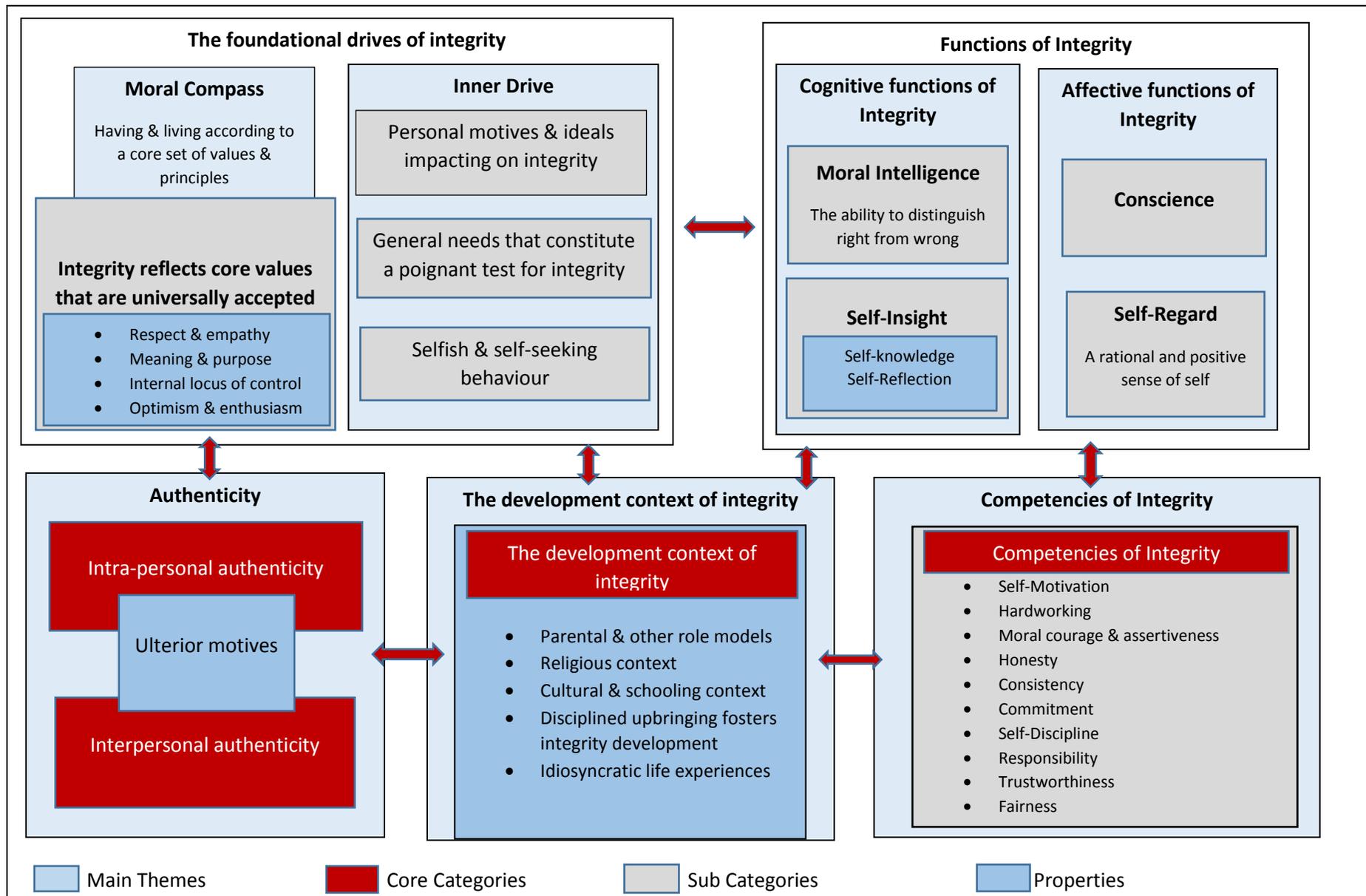


Figure 2.1 - Conceptual framework of integrity and integrity development (Barnard, Schurick, & de Beer, 2008, p. 47)

Ones et al. (1993) conducted extensive research on integrity tests and measures of job performance and counterproductive work behaviour (CWB), respectively. They found support for several moderators of integrity test validity. For instance, validity estimates for job performance criteria were somewhat larger in applicant samples than in incumbent samples. Several variables also appeared to moderate relations between integrity tests and CWB criteria, such that validity estimates were larger for overt tests, incumbent samples, concurrent designs, self-reported deviance, theft-related criteria, and high-complexity jobs. The work of Ones et al. (1993) is highly impressive in both scope and sophistication. However, there is always room to improve where others left off, thus Van Iddekinge, Roth, Raymark and Odle Dusseau (2012), was to reconsider the criterion related validity of integrity tests, they first wanted to look at questions that have been raised about the lack of methodological rigour within the integrity test literature.

Integrity tests have become a prominent selection procedure over the past few decades. Use of such tests for selection often is encouraged because they are thought to predict both job performance and counterproductive work behaviours, and are normally either overt or personality-based. Overt or clear-purpose tests ask respondents directly about integrity-related attitudes and past dishonest behaviours. Conversely, personality-based or disguised-purpose tests are designed to measure a broader range of constructs thought to be precursors of dishonesty, including social conformism, impulse control, risk prone behaviour, and trouble submitting to authority (Wanek, Sackett, & Ones, 2003). Most overt integrity tests focus on measuring attitudes, intentions, and past behaviours related to dishonesty. For example, such tests ask respondents to indicate their views about dishonesty, such as their acceptance of common rationalisations for dishonest behaviour (e.g. attitudes), their perceptions regarding the ease of behaviours such as theft (e.g. perceived control), and their beliefs about the prevalence of dishonesty (e.g. subjective norms) and how wrongdoers should be punished (Wanek et al., 2003). Many overt tests ask respondents to report past dishonest behaviours, such as overcharging customers and stealing cash or merchandise (e.g. behaviour consistency). Thus, because of the theories of planned action and behavioural consistency, people who have more positive attitudes about dishonesty, who believe that most people are somewhat

dishonest, and who formerly have been prone to engaged in dishonest behaviours, are inclined to behave dishonestly in future.

In contrast, personality-based integrity tests primarily focus on personality-related traits, such as social conformity and risk taking. Although potentially relevant to CWB, such traits are more distal to actual behaviour than are the attitudes, intentions, and behaviours on which overt tests tend to focus.

For the purpose of this study, integrity refers to acting in accordance with universally accepted ethical principles, values and norms.

2.4 Personality determinants of integrity and CWB

Various personality factors can either aid or hinder integrity and CWB. People would engage in CWB based on dissimilarities in people, in behavioural inclinations and habits like knowhow and skills; affect, emotions and mood; volition and motivation (individuals make a wilful decision to engage in CWB); and cognitions (attitudes, beliefs, values and attributions) (Sagie, Stashevsky & Kolowsky, 2003). Research by Spector and Fox (2005) into counterproductive behaviours and personality has tended to focus on the Big Five personality traits of emotional stability (one's ability to regulate their mood), extraversion (a person's desire to engage in social interactions), openness to experience (an individual's ability to accept new ideas and new experiences), agreeableness (an individual's ability to get along with others), and conscientiousness (an individual's ability to exercise self-control, plan and organise). Spector and Fox (2005) further maintain that research findings have proven over time that conscientiousness is the most consistent and dependable predictor of CWBs. The other four dimensions tend to have varying prediction depending on the type of counterproductive behaviour that is being observed and are weaker predictors. However, as has been pointed out earlier agreeableness and emotionality personality traits also have a significant impact on CWB.

2.4.1 Defining Conscientiousness

The personality trait, conscientiousness is seen as the trait with profound predictive utility, having shown optimistic effects in educational, health and personnel psychology spheres. In essence, conscientiousness denotes a sense of self-regulation and having the natural ability to plan, organise and performing tasks optimally. Thus implying that a conscientious person is strongminded, focused, results driven, having a clear aim, achievement oriented, hardworking and tenacious. Furthermore, someone who is conscientious is reliable and trustworthy as well as systematic and structured in their approach to work (MacCann, Lee, Duckworth & Roberts, 2009). However, people who measure high on conscientiousness also display a few disadvantages as their meticulousness can be time consuming, obsessive tidiness or a workaholic tendencies can conflict with others standards. People low on conscientiousness may not lack moral standards; nonetheless, such people are less thorough in using them.

Rothman and Coetzer (2003) infer that there is a significant relationship between conscientiousness and job performance and this could be linked to a connection between integrity and conscientiousness. Conscientiousness as a concept has been seen as a likely predictor of job performance. Various researchers see the construct as the epitome of personality and in forecasting performance in numerous occupations. The reason why conscientiousness is seen as not showing significant criterion validity among managers, could be because of the very disposition of conscientiousness. Various researchers that studied the construct of conscientiousness explain that the dispositional virtues that make up conscientiousness are disposed to portray conduct that is planned, compliant, trustworthy, cognisant of detail, and determined (Robertson, Baron, Gibbons, MacIver & Nyfield, 2000). People who lack being obedient or following rules and regulations, unruly and eccentric are generally low scorers on conscientiousness (Goldberg, 1990).

Numerous theoretical studies maintain that the construct of conscientiousness more strongly correlated with integrity compared to other personality traits (Murphy & Lee, 1994). Hence, people low on conscientiousness are probably to score low on integrity

measures. They further emphasised that conscientiousness is likely to be the most beneficial personality trait in predicting scores obtained from integrity tests. Nonetheless, it is not the only personality trait that can be utilised to better comprehend and study the concept of integrity.

The HEXACO conscientiousness dimension is explained by terms such as organisation, hard work, carefulness and thoroughness and it very similar to the Big Five conscientiousness facet. The Honesty-Humility dimension of the HEXACO focuses on the expressions such as honest and sincere while conscientiousness is not defined by terms that are morally accepted or right/wrong (Lee & Ashton, 2004). The HEXACO conscientiousness variable was conceptualised with four dimensions namely Organisation, Diligence, Perfectionism and Prudence.

The following aspects such as cautious, systematic, vigilant and planful typically give expression to the term conscientiousness (Robertson et al., 2000). Furthermore, conscientiousness is the affinity to intrinsically and naturally be focused, achievement oriented, self-regulated, structured and the ability to conform and obey stipulated rules and regulations (Fayard, Roberts, Robins & Watson, 2012). Researchers have found overtime that conscientiousness is the best predictor of CWB, thereafter agreeableness follow, self-esteem, extraversion, neuroticism/emotionality and lastly openness to experience. These research findings have allowed and established the effects of personality factors on CWB and their predictive power or the extent to which personality can impact people to engage or abstain from committing CWBs.

Based on the research done by Penney et al. (2011) the assumption is that employees who score high on conscientiousness would engage in CWB as a tactic to secure resources as well as being able to manage resource loss because of a lack of personal resources for example low Emotionality or Emotional Stability (ES). The primary aim of employees high on conscientiousness is to perform well on the job and to abstain from conduct that inhibits how they perform their work, these employees are generally inclined to desist engaging in CWB as a resource management tactic, that is if they have enough access to other organisational resources to compensate for their

possible insufficiency in personal resources. Thus, for the connection between CWB and conscientiousness to be on the positive side employees have to score low on ES/Emotionality and this is also reflective of employees who experience high levels of restriction or limitations in their work. Research by Penney et al. (2011) also found that employees who are high on conscientiousness are less likely to be involved in acts of CWB because they have adequate personal resources (e.g. high ES/Emotionality) to spend on achieving their work goals and objectives rather than engaging in CWB. Nonetheless, if employees high on conscientiousness lack personal resources they are predisposed to take part in CWB to safeguard resources and alleviate psychological tension or as a way to acquire the necessary resources to perform their work in order to circumvent failure (Penney et al., 2011).

As explicated in the discussion above people who are high on conscientiousness have a tendency to plan and organise their lives, work hard to attain personal and career goals, by all means try and meet the expectations of others, they tend to try and conform and sustain the norms and rules of life more than others would and try to not succumb to enticements. On the other side, people with low conscientiousness are not good at living up to interpersonal accountabilities or to refrain from situations that might be enticing because they approach life in a more spontaneous manner and tend to be more disorganised and unsystematic when carrying out work (Fayard et al., 2012).

It is evident that the personality trait of conscientiousness has affective outcomes. Subsequently, individuals who don't account for their actions, are not goal or achievement oriented and cannot control themselves, hence they will most likely act in ways that may be harmful and destructive to others or even go to the extent of not taking their life serious and destabilising their own success. The results of such conduct is broken and impaired interpersonal relationships and failure to stick to or realise any personal goals, hence these individuals are more prone to experience negative affect (Fayard et al., 2012). In contrast, people who are more accountable, diligent, hard-working and able to control themselves would be more able to refrain from such negative effects by aiming to maintaining positive interpersonal relations and being accountable for their actions as well as being compliant toward set rules and regulations to make sure that they succeed in what they do.

For the purpose of this study, conscientiousness is defined as the extent to which a person displays efficacy, competence and productivity by the way they plan, organise and perform duties or tasks.

2.4.2 Defining Emotionality

According to the HEXACO model, the construct of Emotionality is defined as traits of a person as being sentimental, reliant and anxious compared to showing bravery and toughness. The HEXACO Emotionality dimension consists of a combination of desired and adverse content and is mainly neutral in social desirability compared to the Big Five's Neuroticism dimension (Lee & Ashton, 2004). Anxiety is more socially undesirable on the high extremity while sentimentality is socially desirable. On the other hand, bravery is more socially desirable on the low extremity while selfishness is socially undesirable. The use of Emotionality is utilised to define the factor content truthfully and to alleviate undesirable undertones linked to the terms Neuroticism/low Emotional Stability (Ashton, Lee, Perugini, Szarota, de Vries, Di Blas, Boies & De Raad, 2004). Ashton et al. (2004) did research and found the HEXACO dimensions of Agreeableness and Emotionality are compatible with the dimensions frequently detected in lexical studies of the personality structure as well as being related with a parsimonious theoretical outline (Ashton & Lee, 2007).

The Big Five (B5) or also known as the Five Factor Model (FFM) contains the dimension Emotional Stability vs Neuroticism, however the Emotionality element of the HEXACO represents a re-rotation of the Big Five/FFM. The various traits that represent the HEXACO emotionality facets are nervousness, dependency, sentimentality, courageous, emotional reactivity, self-assurance, toughness and bravery (Lee & Ashton, 2004). The HEXACO emotionality dimension is often compared to the Big Five's Emotional Stability factor, however researchers in the lexical studies domain where the Emotionality factors stems from highlights that this factor differs from the Big Five Emotional Stability factor in significant ways. The emotionality factor does not contain the temperamentalness and irritability facets that is a vital part of the low extremity of the Emotional Stability facet of the Big Five

assessment tool (Lee & Ashton, 2004). On the other hand, the HEXACO emotionality dimension contains aspects of sentimentality and sensitivity on the positive spectrum and courageousness and hardiness on the negative spectrum compared to the Big Five's Emotional Stability dimension. Because of this, the term Emotionality better explains the construct than the dimension of Emotional Stability (Ashton et al., 2004). Henceforth from the above description, the four factors identified in the HEXACO-PI dimension of Emotionality are anxiety, being fearful, dependency, and sentimentality.

For the purpose of this study, emotionality is defined as the sentimentality, dependence and anxiety versus bravery and toughness a person possesses.

2.4.3 Defining Agreeableness

The characteristics that describe agreeableness in an individual are unselfish, being sympathetic/considerate towards others and eager to help or assist people and such people tend to believe that others will similarly to do the same. Furthermore, people displaying agreeable behaviour are normally polite, accommodating, trustworthy, pleasant and kind, helpful, sympathetic and merciful, considerate and accepting (Barrick & Mount, 1991). On the contrary, a disagreeable person is egoistical, self-centred, doubtful of other intents and competitive in nature rather than helpful and supportive. Agreeableness is also a strong predictor of job performance (Tett, Jackson & Rothstein, 1991).

Agreeable employees in a work setup are typically better off when engaging in interpersonal relations and are able to work together effectively when teamwork is required. One would therefore expect employees that score high on agreeableness to display OCB (Organisational citizenship behaviour) and low agreeableness could result in CWB (Kumar, Bakhshi & Rani, 2009). Agreeableness in personality deals with describing social behaviour of individuals based on how people engage in social interaction (Jensen-Campbell & Graziano, 2001). Furthermore, agreeable people focus on bringing positive qualities to a team and allows individuals to minimise the

negative impact of conflict and negotiate outcomes that capitalise on the advantages of group living.

According to the HEXACO PI (Personality Inventory) traits like placidness, flexibility and forbearance vs. anger, antagonism and hostility typically depict Agreeableness. The facets in the HEXACO agreeableness dimension represents a vital addition than what the Big Five/FFM's agreeableness represents. In the Big 5/FFM the low extremity excludes the anger and hostility traits (Lee et al., 2008). Thus, this dimension is particularly different from the Big Five's Agreeableness.

Furthermore the lexical studies done on the personality structure also specify that agreeable people are good natured, understanding, are more agreeable or pleasant as opposed to being unpredictable, short-tempered, quarrelsome/confrontative and critical, thus agreeableness encompasses all the factors well (Lee & Ashton, 2004). The facets of being unpredictable or temperamental as well as displaying irritability are elements of low Emotional Stability in the Big Five spectrum. The main factors that measure Agreeableness in the HEXACO PI are forgiveness (having mercy or clemency towards another), gentleness (to be mild and kind towards others), flexibility (to be tolerant and be lenient with others) and patience (to persevere or endure others shortcomings) (Lee & Ashton, 2004).

For the aim of this study, Agreeableness is defined as being kind, altruistic, concerned to others and willing to assist them.

2.4.4 Defining Honesty

2.4.4.1 Definition of Honesty

The trait of being honest is characterised by being approachable, admitting mistakes, reliable and sincere in one's approach towards others. These are people who can easily be trusted, who are not untruthful, and who are not deceitful and dishonest in their conduct or rob others or the company of property or resources.

The qualities of being honest and showing integrity in one's dealings is what entirely underpins fruitful human interactions and relations. This is a clear indication of the importance of these two traits even in leadership roles hence it is paramount for leaders to possess these traits because it underpins the essence of leadership. The terminologies of integrity and honesty may differ however, the principle explaining the two words is the same. Intrinsicly people feel more secure when honesty and integrity is displayed in any situations rather than concern, nervousness and the guiltiness of dishonesty. The wide-ranging study of honesty over the years has revealed the importance of honesty in leadership regardless of where these studies were conducted (Kouzes & Posner, 1993). An attitude of being and maintaining honesty at all times requires one to take risks because you at all times have to tell everything as it is. According to Stephen Covey (1989) integrity encompassed more than honesty, while honesty is about continuously being truthful, ascertaining that one's spoken words is actually portrayed in real life. On the other hand, integrity is portraying real life in one's words, by keeping vows or promises. How one displays integrity and honesty is based on differences between the promises that a person makes and how many of these promises they keep or live up to.

Honesty according to Johnson and Phillips (2003) is based on six laws.

1. Speaking the truth: leaders prone to convey positive news more readily rather than speaking the truth about unpleasant issues, leaders tend to twist the truth. However, telling the truth can earn leaders respect and trust.
2. Dealing with difficult issues – problems or difficult issues should be dealt with in constructive and honest ways, rather than looking for a trouble-free way of dealing with the problem.
3. Disagree but continue working together - It is vital for an organisational culture to allow people to disagree. People should not be afraid to disagree with company rules, standards and processes that are incorrectly applied in terms of what is regarded as right, moral and aligned to the law.
4. Accept and allow people to speak the truth – if you are wrong accept the truth rather than trying obscuring or seeing the wrong in what is logically, ethically and rationally correct.

5. Appraise and recognise the truth – leaders should create a psychological safe space for employees to freely express their concerns on sensitive issues.
6. Create and foster a climate for integrity – stick to truthfulness even when situations become demanding, maintain ethical principles and values at all times, be consistent and walk the talk.

2.4.4.2 Definition of Honesty-Humility

The Big five/Five Factor Model (B5/FFM) has profoundly contributed to the field of I/O Psychology, however the framework does not consider all personality differences in people. The HEXACO structure has incorporated a sixth personality dimension, which has been supported by cross-cultural research studies on personality (Lee & Ashton, 2004). The sixth facet of the HEXACO is called the Honesty-Humility dimension (H-H), this factor is a newly added dimension. The HEXACO consist of the six dimensions namely Honesty–Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness and Openness to Experience.

There is some similarity between the HEXACO-PI and B5/FFM facets of Extraversion, Conscientiousness and Openness to Experience. The scores of these HEXACO-PI scales have significantly high correlations with the same facets of the B5/FFM personality inventory, although the HEXCAO-PI's Honesty-Humility dimension has no complementary relations or similar factor with a B5/FFM. The Honesty-Humility factor correlates significantly and negatively with prevailing personality concepts that comprises of misuse/exploitation and privilege/entitlement. The Honesty-Humility dimensions of the HEXACO-PI strongly correlates with character traits of primary psychopathy, such as Machiavellianism, Narcissism and Manipulativeness as well as integrity scales of the Supernumerary Personality Inventory (Lee & Ashton, 2004).

It is vital to affirm if the HEXACO-PI dimension Honesty-Humility (H-H) is empirically independent from other personality factors. According to O'Neill, Lewis and Carswell (2011) when focussing on the Honesty-Humility dimension (for example a person being trustworthy), it centres around traits that organisations value and would like to see in all their leaders and employees. The H-H personality is linked to traits such as genuineness and dependability and people who are high on H-H are unlikely to misuse

others. Thus, H-H dimension has shown to determine behaviours that are linked to CWB, such as immoral decision making and sexual favours in workplace for promotions (Lee & Ashton, 2004). Furthermore, Lee and Ashton (2004) maintained that this factor is vital in identifying counterproductive work behaviours and is well-defined by four factors namely fairness (propensity to evade double-dealing, dishonest and theft), sincerity (the propensity to of being unpretentious/sincere, genuine and true to oneself), greed avoidance (propensity to not be enticed by money, affluence and luxurious belongings) and modesty (propensity not to always feel entitled but rather normal).

For the purpose of this study, Honesty can be defined as the quality of being fair and truthful.

2.5 The relationship between integrity and CWB

Integrity can be seen as an ethical, personal or organisational value (Palanski, Kahai, & Yammarino, 2011; Rossouw & van Vuuren, 2010). Integrity has been more specifically identified as an ethical value along with transparency/honesty, consistency, respect, and fairness (Palanski et al., 2011; Rossouw & Van Vuuren, 2010). The acts of CWB looks at how employees conduct themselves at work and how their conduct has a negative impact on fellow employees or the organisation at large, and such destructive behaviours include stealing, damage to company property, verbally attacking or foul talking towards other, demeaning others, loafing at work, dishonesty and not telling the truth, being uncooperative at work and attacking or physically fighting with co-workers (Penney & Spector, 2005). This growing interest in CWB is due to the common CWB occurrences in organisations which had posed negative impacts on organisations through deviant actions and a decrease in employee efficiency and effectiveness, escalation of company insurance costs, destruction of company property and more people leaving the organisation as a result of higher turnover rates and the people in terms of increased job dissatisfaction and visible job stress (Leblanc & Kelloway, 2002).

An advantage adhering to sound ethical values in an organisation is that the internal and external stakeholders maintain good relationships with one another (Rossouw &

van Vuuren, 2010). Therefore, ethical values have to do with values relating to human conduct and dealing with what is 'right' and 'wrong' and thus enabling an organisation to set normative standards for its employees. One can infer from this that if organisations encourage their own interests and not manage those interests appropriately; it might lead to deviant workplace behaviour and a loss of integrity.

A deterioration of integrity can lead to serious financial, societal and environmental damage. Not only are values important in an organisation with regard to acting ethically, they can also be seen as important in relation to the personal values of individuals and how these in turn can impact on the organisation and its ethical conduct. Thus integrity is vital as a personal value. The personal value of integrity is often closely aligned to ethics, to the extent that at times it is used as a substitute for and has been defined as the moral character of an individual or even of an organisation (Rossouw & Van Vuuren, 2010). A person with integrity is seen as someone who abides by a set of ethical standards on a consistent basis. Similarly, consider someone to have integrity when their behaviour is seen to be consistent with their values and that they are trustworthy and honest (Becker, 1998).

According to Fourie (as cited in Swanepoel, 2012) integrity is a complex and multi-faceted aspect consisting of an individual's personality. It has a psychological and behavioural basis, and might be considered to have an underlying psychodynamic basis as well. It is also a construct with a strong cognitive component, possibly related to pro-social behaviour. Furthermore, integrity reflects a tendency towards ethical behaviour and maintaining sound relations with other people and is a construct that is observed within a specific context.

Various studies are greatly focusing on a deeper understanding of integrity and CWB. Research has found an increase in the likelihood of engaging in deviant workplace behaviour was encountered when a decrease in the risk associated with the behaviour was presented (Mikulay, Neuman & Finkelstein, 2001). Regarding the possibility of employees engaging in deviant workplace behaviours such as theft, individuals who appeared to be relatively high in integrity were not affected by the variations in the environmental risk associated with the behaviour. In contrast, a lack of risk in certain

situations enabled individuals low in integrity to engage in theft more effortlessly than would have been the case in situations associated with higher risk.

Research through the form of meta-analytical investigation was done by using 65 independent samples and the results showed a negative mean correlation of -0.26 concerning integrity and CWB (Van Iddekinge et al., 2012). With the correction of the correlation coefficient for unreliability in the criterion the score rose to -0.32. Ones et al. (1993) found in their meta-analysis a negative mean correlation of -0.33 between the two concepts, however this escalated to -0.47 once correction was done for the overall CWB criteria.

According to the research conducted by Hunter (2014), the relationship between integrity and CWB was significantly negative ($t = -5.83, p < 0.05$).

Thus, based on the foregoing discussion, it can be postulated that integrity has a negative influence on CWB.

2.6 The relationship between Conscientiousness and CWB

Within organisations there are behaviours displayed in a positive light, these are normally edifying and beneficial for the organisation. Employees who engage in such behaviours show extra-role behaviours and these are summed up in organisational citizenship behaviour. Employees who display OCB voluntarily conduct such behaviour by serving the organisation to prosper and grow positively. These behaviours includes lending a helping hand to co-workers, giving a positive view and positively representing one's organisation externally, assisting new employees to settle in. On the other hand, employees may display negative behaviours that can be detrimental and destructive to employees; these are called counter productive work behaviour (CWB) as already explicated. CWB is a decision made by an employee to voluntarily engage in behaviours that are damaging to the organisation and to employees, like stealing company resources whether it be time, equipment or resources, being unpunctual at work and leaving early from work, abusing drugs or alcohol at work. Whether a person's behaviour has a positive or negative impact on

work, it is still considered as job performance, thus its vital for organisations to closely monitor what behaviours employees display at work. Employees who engage in CWB does effect the optimal functioning of human capital in organisations, as their behaviours impact others resulting in them feeling stressed and dissatisfied in their jobs because of such pressures and can ultimately lead to them leaving the organisation. Thus, one can conclude that there are two types of behaviours displayed by employees in organisations namely OCB and CWB (Bowling, 2010).

As previously highlighted, employees who are conscientious exhibit dependability, capability, attainment driven, accountable, self-disciplined, loyal and resourceful. Individuals who normally attain high scores on the conscientiousness factor are seen as structured, they are good at planning and are goal directed (Vardi & Weitz, 2004). Consequently, people who are high on conscientiousness show greater signs of job satisfaction, better job security, are generally more positive towards their work and committed in their relationship with others. Research has shown that conscientiousness negatively correlates to CWB in organisations (Farhadi, Fatimah, Nasir, & Wan Shahrazad, 2012). A pilot research conducted by Farhadi et al. (2012) with a sample size of 162 employees of a specific organisation showed that conscientiousness was negatively related to CWB. Similarly a study conducted by Bowling (2010) confirmed the above finding that a negative link exists between CWB and conscientiousness ($r = -0.35$).

Furthermore, a meta-analytic examination that primarily focused on investigating the relationships of specific antecedents of CWB established that conscientiousness correlates negatively with CWB ($r = -.38$) (Dalal, 2005). In a meta-analytic study, Berry et al. (2007) further established a negative relationship between conscientiousness and workplace and interpersonal deviance or CWB.

Further research on CWB and personality by Salgado (2002) confirmed that conscientiousness is a sound predictor of counterproductive behaviours, such as stealing; problems with behaving at work based on workplace policies and procedures; misuse of drugs and alcohol at work; destruction of company infrastructure and

equipment; noncompliance to company rules and regulations, and other similar destructive behaviours ($r = -.16$, $\rho^2 = .26$).

Further investigation by Hunter (2014) into the relationship between conscientiousness and CWB confirmed a negative relationship ($t = -5.68$, $p < 0.05$). This finding concurs with the research done by other researchers in the same field (Cullen & Sackett, 2003; O'Neill & Hastings, 2011; Ones, Viswesvaran, & Schmidt, 2003).

Higher levels of conscientiousness were associated with more organisationally directed behaviours (Bolton, Becker & Barber, 2010). Employees who are more likely to obey organisational rules and regulations, who are dependable and focused at meeting their goals and targets, have a high degree of conscientiousness. While employees who do not really care about how they perform their work, are uncaring, messy, not systematic in their approach to work, untidy and inefficient tend to be low on conscientiousness (Jensen & Patel, 2011). Such employees feel less motivated to adhere, maintain and comply with organisational standards and procedures and thus lead to increased CWB,

Lee, Ashton, and De Vries (2005), using an Australian sample, found a relationship between conscientiousness in the HEXACO model and work delinquency of $-.16$, as well as a correlation between conscientiousness in the International Personality Item Pool (IPIP) and work delinquency of $-.27$. In a Canadian sample, Lee et al. (2005) found a correlation between conscientiousness in the HEXACO model and work delinquency of $-.38$, as well as a correlation between conscientiousness in the NEO Five Factor Inventory (NEO-FFI) and work delinquency of $-.41$. Lee et al. (2005) furthermore found a correlation between conscientiousness in the HEXACO model ($-.34$), as well as in the IPIP ($-.28$), and work delinquency in a Dutch sample.

Thus, based on the aforementioned studies, it can be hypothesised that conscientiousness has a negative influence on CWB.

2.7 Personality and integrity

Personality over the years has become an integral part of selection and recruitment in organisations, as it helps in identifying individuals who meet the person-environment fit and also to highlight possible problematic applicants. Thus, a better understanding of integrity in relation to specific personality traits will be discussed in the following section.

Evidence proposes that if one investigates the scores obtain by a person on some personality facets and combine these, there is a possibility that one can predict a person's integrity (Marcus, Hoft & Riediger, 2006). Through the investigation there are three personality dimensions that were prominent namely conscientiousness, agreeableness and neuroticism/emotionality. Thus implying that if a person is emotionally more stable, portraying agreeableness and they are trustworthy, the higher their integrity. Individuals who attain lower scores on aggression, thoughtlessness, and susceptible, and higher scores on trustworthy, direct and honest, and suspicious, are likely to score high on integrity (Furnham & Taylor, 2011). On the other hand, from a team focused approach one would look at the overall team scores for agreeableness, conscientiousness and emotional stability and observe possible red flags such as low group unity, deprived communication, increased social clashes or conflict and unequal sharing of the workload among team members, which ultimately affect integrity in a group setup (Barrick & Mount 1991).

The constructs of integrity and personality test are paramount for making excellent recruitment and selection decisions as they can give an indication of red flags in certain candidates as well as concern areas of potential job incumbents who perform exceptionally well in structured interviews but their assessment results show a different picture. These indicators can assist and guide organisations in making informed decisions when looking for an ideal candidate that fits the organisational culture as well as the role. Byle and Holtgraves (2008) also found that conscientious people are not prone to answer or respond falsely on integrity test.

Ones, Viswesvaran, and Schmidt (1993) highlighted that integrity assessments explore deeply into universal personality traits that are more wide-ranging than any of the Big Five traits, exploring higher-order facets that include agreeableness, emotional stability and conscientiousness.

2.7.1 The relationship between conscientiousness and integrity

Generally people who are conscientious are seen as being reliable, cautious and accountable. The one trait that prominently stands out in a conscientious person is reliability or dependability. An individual who scores high on conscientiousness displays a principle belief to be cautious, accountable, prepared and structured, it is how the person prefers to conduct him/herself. Becker (1998) maintains that showing conscientiousness is not sufficient to confirm its importance to integrity. For any individual to ascribe themselves of being honest, the person must possess a level of integrity and must conduct themselves in ways that are ethically acceptable or permissible. They should be individuals who are principled in their actions and conduct, rather than being focussed on one principle. In addition, the character trait of conscientiousness can be seen as a term having morally laden as well as morally neutral components. For example a person who is accountable in his/her actions and conduct is essentially linked to integrity as the person keeps his/her word of doing what he/she pledged to do. Subsequently, when a person is pre-cautious and well-structured in what he/she does, if the person sticks to a certain way of organising themselves, people may vary in how they are organised or pre-cautious but still maintain an acceptable level of moral conduct. This implying that the morally loaded components of conscientious may be vital to integrity while the morally neutral components may be not.

Conscientiousness has a strong impact on the job performance of an individual. It is therefore important to reflect on this when predicting and clarifying determinants of performance in the workplace (Vardi & Weitz, 2004). In addition to the previously mentioned positive traits of conscientious individuals, these individuals also display

higher levels of being satisfied at work, feeling more secure in their jobs, tend to be more optimistic and loyal within their social relations with others.

Murphy & Lee's (1994) research support that conscientiousness shows a stronger relationship with facets of integrity than any other personality trait. They further explicate that low scores of conscientiousness are expected to also score low on integrity assessments (Murphy & Lee, 1994). Thus this personality trait is most probably the most valuable personality attribute to forecast integrity test scores; however, it is not the sole personality trait for predicting integrity as a concept.

According to Murphy and Lee (1994), conscientiousness is a descriptive concept if compared to other personality traits, it is most possibly the preeminent predictor of integrity test scores. However, the construct of conscientiousness and integrity are not alike. Integrity is linked to conducts such as honesty, evading stealing, lying or abusing the trust of someone, while conscientiousness focuses on how reliable, determined and goal oriented a person is. Thus, two distinct characteristics in a person are displayed by these two constructs.

Conscientiousness consists of five dimensions in the lower order structure namely orderliness, productiveness, accountability, able to control urges and conformity, and these dimensions are usually displayed through a person's behaviour (Fayard et al., 2012). Conscientious people are organised, almost always go the extra mile in achieving goals, accommodating to others, try to comply with regulations, rules and norms. However, a person low on conscientiousness are impulsive, incoherent, and unlikely to meet their goals, and irresponsible at times. Thus, these behaviours that make up the different facets of conscientiousness are likely to have a positive impact on behaviours that are linked to integrity.

Conscientiousness is an emotion that an individual is self-aware of (specifically the emotion of guilt) rather than being a basic emotion such as anger, happiness, sorrow, anxiety, and astonishment. These emotions that individuals are aware of arises through a specific process (Tangney & Dearing as cited in Fayard et al., 2012).

Emotions that a person is self-aware of (e.g. guilt) stems from when a person evaluates their own behaviour to decide if such behaviour aligns with whom they are or their identity and may also be linked to causes inside or outside the person (Tracy & Robins, 2004). It can thus be concluded that such processes are connected to conscientiousness as the person has knowledge about his/her use of internalised standards and beliefs. Consequently, conscientious individuals are well acquainted on how they perceive their ideal behaviours in certain situations, they adopt a stronger internal norm of behaviour more than others. These individuals can easily reflect how their behaviour is aligned to following rules and regulations and if such behaviour is constant with their identity of being conscientious. The person is focused on conforming to norms and meeting certain expectations, as a result leading to affective outcomes. Hence, integrity in the organisation can be increased through the affective outcomes of conscientiousness (Fayard et al., 2012).

Based on Lee et al. (2008), weak correlations were discovered between the conscientiousness measures of the HEXACO-PI (self-report and observer report formats), the conscientiousness scale of the NEO-FFI, and the Employee Integrity Index, which measured the outcome variable of Employee Integrity. The correlation between Conscientiousness and Employee Integrity was 0.19 in the HEXACO-PI self-report; 0.10 between Conscientiousness and Employee Integrity in the HEXACO-PI observer report; and 0.24 between Conscientiousness and Employee Integrity in the NEO-FFI.

Multiple regression analyses were performed to investigate the role of the scales of the HEXACO-PI and NEO-FFI in forecasting the outcome variables of Employee Integrity. Conscientiousness was significantly ($p < 0.01$) and positively associated with Employee Integrity regarding the HEXACO-PI (self-report) and NEO-FFI. (Lee *et al.*, 2008), indicating that although the correlations are low, conscientiousness does still play a positive and significant role in predicting integrity. Hunter (2014) also reported a substantially positive link between integrity and conscientiousness ($t = 5.61$, $p < 0.05$).

Byles and Holtgraves (2008) state that what frames conscientiousness is a person's capacity to regulate his/her urges and demonstrates behaviours like controlling oneself, being dependable, being on time and being organised and structured in how a person conducts themselves and their work. According to Murphy and Lee (1994), studies have presented positive correlations between test scores of integrity and conscientiousness, exhibiting significant correlations ranging between 0.30 and 0.45. One does expect the correlations to be high as the two constructs, integrity and conscientious, are closely connected, integrity as a construct is prevalent in aspects of conscientiousness. As individuals measuring high on conscientiousness are known for being rule compliant and having high moral standards compared to low scorers, who are more likely to engage in dishonest and counterproductive actions (Byles & Holtgraves 2008).

Lee et al. (2005) found a positive correlation between conscientiousness in the HEXACO model and integrity of .25, as well as between conscientiousness in the Big Five Personality Inventory (BFI) and integrity of .28.

As elucidated in the above-mentioned studies, it can be postulated that Conscientiousness has a positive influence on Integrity.

2.7.2 The relationship between emotionality and integrity

Emotionality can be an important indicator of whether a prospective employee is likely to engage in behaviour displaying lack of integrity and actions that are counterproductive before recruiting such an individual, thus giving an early indication/warning of high or low scores on this dimension and the pros and cons of selecting or recruiting them into an organisation (Furnham & Taylor, 2011). The emotionality dimension looks at how individuals differ with regards to being altruistic against being aggressive/hostile in behavioural conduct. Furthermore, emotionality focuses on direct feelings of being empathic toward others and having an emotional bond to others and also indirectly by pursuing behaviours that are non-harming others but rather being helpful in nature and reaching out to others (Ashton & Lee, 2001)

Ethical decision making is an important competency or skill in any organisation, especially in leadership roles, to ensure sound business principles are applied in making decisions, thus individuals low on Machiavellianism have displayed behaviours that are linked with ethical decision making and sound behavioural actions when leading organisational (Jones & Kavanagh as cited in Ashton & Lee, 2006). Low scores on the HEXACO-PI Emotionality dimension also have a positive link to making sound and ethical decisions (Ashton & Lee, 2006).

High scores on the Emotionality dimension are bound to experience fearfulness namely physical vulnerabilities, when stressed by life events they may experience anxiety, or they become insecure and thus needing emotional support from those close to them, they also feel emotionally attached to people and have feelings of empathy towards others. On the other hand people low on emotionality are less stressed by certain life events, are not very emotionally attached to others, can deal with their own concerns and fears rather than always involving other in their personal issues (Lee & Ashton, 2004). One can clearly see the danger of both high and low scorers on Emotionality in the work context and their disposition to engage in CWB and ultimately how such behaviour impacts the integrity of an employee and the negative influence it has on overall organisational functioning in the long run.

Lee et al. (2005) found a positive correlation between Emotionality in the HEXACO model and Integrity of .28. However, Lee et al. (2008), reported weak correlations amongst the Emotionality scales of the HEXACO-PI (self-report and observer report), and the Employee Integrity Index, which measured the outcome variable of Employee Integrity. The correlation between Emotionality and Employee Integrity was 0.03 in the HEXACO-PI self-report and 0.09 between Emotionality and Employee Integrity in the HEXACO-PI observer report.

It can therefore be postulated that Emotionality has a negative influence on Integrity.

2.7.3 The relationship between agreeableness and integrity

The agreeableness personality trait applies to a pro-social and group association with others, making agreeable individuals to be altruistic, grateful and humble (John & Srivastava, as cited in Störmer & Fahr, 2010). Agreeableness is an important trait in integrity testing as it measures inter-personal tendencies such as trust, altruism, compliance, and straightforward. Thus, agreeable individuals have harmonious interpersonal environments due to their desire to get along with others. In turn, employees who are low on agreeableness are likely to be more counterproductive than employees who score high on this dimension.

Suls, Martin and David (1998) further explicate that employees high on agreeableness generally experience more unpleasant affect when they engaged in behaviours opposite to their traits (e.g. being sarcastic or quarrelsome). As employees high on Agreeableness tend to display strong belongingness motivations as well, and such employees would thus not easily show deviant work behaviour, as such behaviours could jeopardise their membership in a social group or organisation (Bolton et al., 2010).

Research by Byle and Holtgraves (2008) concluded that a relatively positive and moderate connection exist between agreeableness and integrity ($r = .39$). The outcome of their finding is coherent with previous research that confirmed that following conscientiousness agreeableness is the second strongest personality trait that significantly correlates with integrity test scores (Logan et al., McFarland & Ryan as cited in Byle & Holtgraves, 2008).

Based on Lee et al. (2008), weak correlations were established amongst the agreeableness scales of the HEXACO-PI (self-report and observer report), the agreeableness scale of the NEO-FFI, and the Employee Integrity Index, which measured the outcome variable of Employee Integrity. The correlation between agreeableness and Employee Integrity was 0.26 in the HEXACO-PI self-report, 0.11

between agreeableness and Employee Integrity in the HEXACO-PI observer report, and 0.37 between agreeableness and Employee Integrity in the NEO-FFI. The process of multiple regression analyses was done to investigate the function of the scales of the HEXACO-PI and the NEO-FFI in predicting the outcome variables of Employee Integrity. The relationship between agreeableness and employee integrity for both self-report and observer reports of the HEXACO-PI were not significant. On the other hand, Agreeableness significantly ($p < .01$) predicted employee integrity in the NEO-FFI (Lee et al., 2008).

Lee et al. (2005) found a positive correlation between Agreeableness in the HEXACO model and Integrity of .20, as well as between Agreeableness in the Big Five Personality Inventory (BFI) and Integrity of .32.

Thus, it can be postulated that agreeableness has a positive influence on Integrity.

2.7.4 The relationship between honesty-humility and integrity

It is important to appraise how the Five-factor model/FFM was developed. According to Lee, Ashton, and de Vries (2005) the model was formulated based on lexical studies carried out in the English language on the structure of personality. However, further lexical studies were done in a range of languages which included English, and these studies found a sixth facet of personality (Ashton et al., 2004). It is imperative to highlight that the similar approach was used to formulate the Big Five model; however the six faceted model presents a better structure of the personality factors. The non-inclusion of the sixth facet in the five-factor model/FFM weakens the effectiveness of predicting vital concepts or constructs in the field of Industrial/Organisational Psychology. The theory is assessed by using two regularly studied criteria in I/O Psychology, which are counterproductive work behaviour and overt integrity test scores (Lee et al., 2005).

The addition of the Honesty-Humility dimension in predicting CWB has enhanced the measurement of behavioural misconduct and criminal wrongdoing in the workplace and hence clarifying the construct of overt integrity (Lee et al., 2005). The Honesty-Humility facet in the HEXACO assessment tool has an advantage over the B5/FFM in

I/O psychology field and this facet has greatly contributed to the predictive value of using the HEXACO model. The honesty-humility dimension has been a stronger predictor of integrity and corporate moral decision making than what was possible on the traditional B5/FFM personality framework (Lee et al., 2008).

Honesty-humility consists of characteristics such as truthful, impartiality, genuineness, reliability opposed to self-indulgence, arrogant, fake and cunning (Marcus et al., 2006). The emphasis of the H-H factor is on a person's ethical conscience. The H-H factor in relation to someone low on the FFM Agreeableness factor, focuses on psychopathy or Machiavellianism which is related to a person that is socially difficult to get along with and displays predispositions of narcissistic or selfish conduct (Lee et al., 2005) as opposed to exhibiting aggression and hardness or being harsh (Marcus et al., 2006).

Moreover, Honesty–Humility was significantly linked to integrity assessments used in two Canadian samples (Ashton & Lee., 2006; Lee et al., 2005). Lee et al. (2005) established a positive relationship between Integrity and H-H of 0.53. It is evident that the inclusion of the H-H dimension positively contributes to affirm the reliability and validity of integrity tests (Lee et al., 2005; Lee, Ashton & Shin, 2005).

Based on Lee et al. (2008), moderate correlations were established between the H-H scale of the HEXACO-PI (self-report and observer report), and the Employee Integrity Index. The correlation between Honesty-Humility and Employee Integrity was 0.44 in the HEXACO-PI self-report; and 0.39 in the HEXACO-PI observer report.

Furthermore, multiple regression evaluations were done to investigate the function of the scales of the HEXACO-PI in predicting Employee Integrity and a moderate significant ($p < .01$) relationship was found between honesty-humility and employee integrity for the self-report and observer report formats of the HEXACO-PI (Lee et al., 2008, pp. 157-160).

Thus, it can be postulated that Honesty-Humility has a positive effect on Integrity.

2.8 STRUCTURAL MODEL

Depicted below in Figure 2.2 is the structural model to be tested as it was derived from the abovementioned literature and logical reasoning. The model consists of four exogenous latent variables and two endogenous variables.

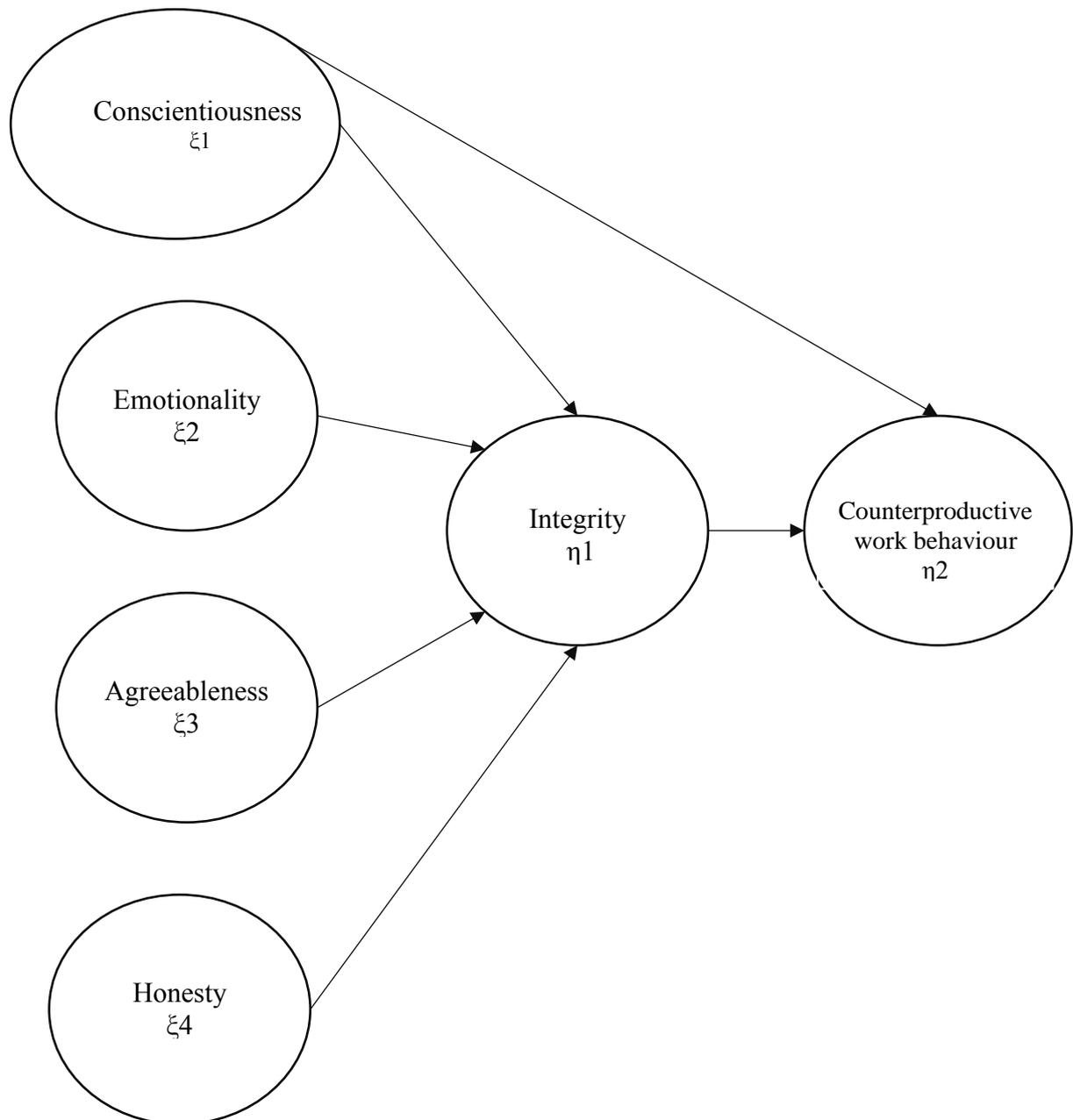


Figure 2.2: The proposed structural model

2.9. Summary

This chapter dealt with the relationships between counterproductive work behaviour, integrity and specific personality traits (i.e. conscientiousness, emotionality, agreeableness, and honesty-humility). The chapter explicated the interlinkages between different constructs as established through empirical literature and emphasised the different definitions of the identified variables used in this study. Hypotheses were formulated based on the exploration of the different relationships of the constructs in this study. The ensuing chapter is centred on the research methodology employed to evaluate and validate the projected hypotheses.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

A detailed overview and study of the various constructs used in this research was explicated by aligning it to current scientific sources was discussed in chapter 2. A thorough discussion of the different relationships between counterproductive behaviour, selected personality traits and integrity was done based on the various relationships depicted by the proposed structural model. The main objective of this study was to examine the relationship among counterproductive work behaviour, selected personality traits and integrity within the workplace and to empirically fit the structural model as well as scientifically evaluate and validate the hypotheses in this study.

Consequently, chapter 3 will mainly focus on explaining in depth the research design used, sampling technique, various measuring instruments utilised, substantive research hypotheses and statistical analysis procedure applied to determine the model fit and the significance of the various paths of the hypotheses.

3.2 Research design

The research design was a guiding path for this study by ensuring that the structural model developed for this research (see Figure 3.1) ascertains that the operational research hypotheses are translated into statistical hypotheses.

A research design provides a strategic framework or action plan that aids in linking research questions and the execution or implementation of the research. The research design is a plan that directs the procedures and conditions for the collection and analysis of data in a way that aims to combine relevance to the research purpose (Blanche, Durrheim & Painter, 1999). The research design is basically a strategy,

guiding principle or plan on how the study will be performed (Babbie & Mouton, 2001). Furthermore, it is a guideline in which the operational research hypotheses are verified, and its primary function is to regulate (dependent indicator variable) variance so as to get empirical findings that can be interpreted unambiguously for or against the operational hypotheses (Theron, 2010). In short, a researcher strives to draw coherence and credible conclusions or inferences from his or her observations and thus plan observations in a manner that ensures the fulfilment of the research purpose of the study.

For this study an *ex post facto* correlational design was used. This form of research design the researcher does have direct control over the independent variables. The latent variables either already occurred or they are not inherently manipulatable (Kerlinger & Lee, 2000).

3.3 Sampling

A major concern with sampling is representativeness, it is a challenge for a researcher to select or choose a sample that is representative of the population to be used in the study in order to draw conclusions (Blanche et al., 1999). The technique of convenience/availability sampling (i.e., a non-probability sampling technique) was utilised in this study (Babbie & Mouton, 2001). This technique implies that only individuals who have shown that they are available and willing to participate were used for the study. Various measuring instruments were used to measure the influence of personality traits on integrity and counterproductive work behaviours. The target population for this particular study consisted of non-managerial employees with at least a Grade 10 education working in Namibian organisations. An overall sample size of 200 employees was regarded as suitable for this study, taking into account the availability of respondents from organisations and the commitment of the employer to allow employees to take part in this study. In order to perform or apply structural equation modelling a sample size of 200 observations or more appears to be satisfactory Structural Equation Modelling (SEM) was used as the statistical analysis method. In order to perform SEM the sample size should be large as the process is based on covariances that are less stable when projected in small samples. When the

sample size is less than 200, it usually results in parameter estimates that might lack statistical power. In other words, sample size also influence parameter estimates and chi-square tests of fit (Ullman, 2006).

The usage of the non-probability sampling procedure to choose the sample, has one major inherent drawback regarding the generalisability of the findings to the targeted population. An ideal preference would be to conduct the research study at a single organisation with all employees in the respective organisation, however access to one organisation only, is difficult and most organisations only permit researchers to access to one or a few divisions or departments. It is vital to emphasise that the identities of the organisations that participated in the research was not disclosed, this is to maintain and ensure confidentiality and privacy of all respondents and information they shared as well as ascertaining that the information shared does not tarnish or damage the company image of the respondents/participants.

The measuring instruments measured integrity, the selected personality traits and counterproductive work behaviour (CWB) across various occupations in non-managerial positions. The instruments were aimed at Namibian employees in non-managerial positions in which they are not formally responsible for the management of one or more followers. A non-managerial position is basically any position within an organisation for which a person is not formally held accountable for the management of subordinates, where an employee is responsible for his/her individual output only.

3.3.1 Data collection procedure and ethical considerations

Various Namibian companies, including parastatals, private and public companies, showing willingness to give access to the researcher to conduct the research were approached to gather data. A central Human Resource (HR) person was the contact or central person for each organisation that the researcher liaised with. Three of the organisations sent the invitation to the participants; while two indicated that the researcher should distribute the questionnaires and provided only a list of the email addresses of their employees to the researcher. The participants were invited to voluntarily take part based on the operational level in the organisation. The research

study aimed that participants be performing at a non-managerial level. Individuals from these levels within the organisation were given the choice to voluntarily take part in the research, thus the discretion rested with each prospective participant to answer the questionnaire or not. The organisation or contact person did not know if any of the participants completed the questionnaire or not, as they did not have access to verify this.

The target population for this study comprised non-managerial employees in Namibian companies. The participant was the subject to give input for this study and whose input was further analysed

A decision was made to use large organisations for this study in order to ascertain and assure validity, thus organisation with more than 100 employees were approached to participate in the study. This helped in achieving a sample size of at least 200 employees. In total 227 participants responded and filled in the questionnaire, which constituted employees employed at five big companies in Namibia. Permission to conduct the research was obtained from the five organisations involved in this study. Four of the organisations have a national footprint in Namibia, with local branches across the country, while one of the organisations is a mining company and based in the north of Namibia. The questionnaire that was developed and designed for this study, was used to gather data that was circulated through the Stellenbosch University's internet survey platform, and was sent to the participants from the five organisations. For this study no information was gathered by means of paper-and-pencil tests. Participants/respondents were required to agree to the requirements stipulated in the instructions for the questionnaire. Confidentiality was assured to all participants and that their responses would be maintained and treated anonymously as no names of persons or organisations would be publicised in the study. As the data from participants' responses was directly stored on Stellenbosch University's database, all participants were assured that no potential discomfort and risk was foreseen and that their responses would be stored safely on a central database and no manager would know how they responded to the questionnaire.

The informed consent decision to participate required that the participant be well-versed with the main purpose and objective of the study, that they understand their involvement in the study, how and for what reason the research will be used for, who will be conducting the research, what association they have with Stellenbosch University, what their rights are as participants, and who they can contact in case of further queries (Standard Operating Procedures, 2012). The data was coded by Stellenbosch University's IT (Information Technology) department. Each email address was coded once each survey was received, thus no email address was retrieved or accessed, therefore ensuring anonymity and confidentiality. All information and data pertaining to the study was kept by a protected computer password with only the researcher and supervisor having sole access to the data. Assurance to respondents that a proper process on the ethical clearance for the study was prepared and submitted for approval to the Research Ethics Committee of Stellenbosch University.

As CWB is illegal, prosecutable criminal offences answering some of the statements and questions on the survey that were used for this research might have resulted in participants experiencing emotional discomfort. It is vital that the dignity, right, safety and well-being of each participant, be ensured at all times during and after the research. Two of the instruments used in the study are available in the public domain (HEXACO-PI and Workplace Deviance Scale). This study looked at participants' behavioural tendencies thus this could make participants feel uncomfortable that their employer might get hold of the data and could create the perception that such revelation or answering the questionnaires could lead to legal or internal disciplinary procedures being applied. Such concerns/matters were highlighted on the informed consent form, that confidentiality and anonymity of each participant was ensured at all costs.

The data collected was treated anonymously and confidentiality was maintained. Results will only be presented in summative format to the management of the various organisations that took part in this study.

3.3.2 Demographic profile of the sample

The entire sample (N = 227) constituted of 154 females (67.8%) and 73 males (32.2%). The sample represented an average age of 30.21 years. The race distribution of the sample consisted of: African (49.8%), Coloured (33.9%), Indian (0%), White (14.5%) and other (1.8%). The greater part of respondents were in non-managerial roles (86.3%) and lower-level management (9.3%), and predominantly from the financial services industry (75.8%). The mining industry (2.6%), retail (8.8%), parastatal and public service (1.3%) also formed part of the sample, however in lesser numbers. These detailed and descriptive statistics are displayed in Table 3.1.

Table 3.1

Sample Profile

VARIABLE	FREQUENCY (N)	%
GENDER		
Male	73	32.2
Female	154	67.8
AGE OF PARTICIPANTS		
Below 21	1	0.4
21 – 30	144	63.4
31 – 40	59	26
41 – 50	15	6.6
Above 50	8	3.5
ETHNIC GROUP		
African	113	49.8
Indian	0	0
Coloured	77	33.9
White	33	14.5
Other	4	1.8
JOB LEVEL		
Non-managerial	196	86.3

VARIABLE	FREQUENCY (N)	%
Lower level management	21	9.3
Middle level management	6	2.6
Upper level management	4	1.8
INDUSTRY		
Mining and manufacturing	6	2.6
Retail	20	8.8
Financial services	172	75.8
Construction	0	0
Health and social welfare	0	0
Parastatal and public service	3	1.3
Other	26	11.5

3.4 Treatment of missing values

Mels (2003) explains that missing values are often present in multivariate data sets. Missing values are mainly caused by non-responses on a specific item by participants, however additional factors such as absenteeism can lead to missing values as well. Missing values identification should be done before data is analysed. The risk of not treating missing values can lead to deficient indicator variables. Five options were identified as possible solutions for addressing the problem of missing values. These are:

1. List-wise deletion
2. Pair-wise deletion
3. Imputation by Matching
4. Multiple imputations
5. Full information maximum likelihood imputation

The technique chosen to aid in treating missing values is dependent on the total number of missing values and the kind of data, depending on whether the data is multivariate normal distribution.

3.4.1 List-wise deletion

List-wise deletion is a technique that removes all cases in the measurement on variables that has missing values (Myers, 2011; Pallant, 2010). It is further beneficial because the same number of cases are used to perform all analyses (Pallant, 2010).

3.4.2 Pair-wise deletion

In the case of pair-wise deletion, only variables having missing values are removed or deleted.

(Myers, 2011). Basically implying that pair-wise deletion eliminates a case solely if it is missing in the data needed for a particular analysis but can be incorporated in any analyses for which the required information is available (Pallant, 2010).

3.4.3 Imputation by matching

Imputation by matching helps in dealing with the missing value issue is commonly utilised when the postulation on multivariate normality is not achieved. It is a procedure of replacing actual values for missing values. The replaced values for a case are derivative of one of more cases having a similar way of response over a series of matching variables. (Jöreskog & Sörbom, 1996).

3.4.4 Multiple Imputation (MI)

According to Mels (2003) there are two techniques that are used to prevent the reduction of the sample size, namely full information maximum likelihood (FIML) and multiple imputation. The best technique, would most probably be the multiple imputation method (Du Toit & Du Toit, 2001; Mels, 2003). The multiple imputation method was used in this study basically implying that a number of imputations are created that each makes a completed data set.

3.5 Measuring Instruments

Three measuring instruments were used for measuring integrity, counterproductive work behaviour, and four personality traits (conscientiousness, agreeableness, honesty-humility and emotionality).

3.5.1 Honesty/Humility

The HEXACO personality scale developed by Ashton and Lee (2008) was used to measure the personality trait of honesty-humility. The 10-item Honesty-Humility Scale has four subscales, namely sincerity/genuineness, fairness/justice, greed-avoidance, and modesty/humble (Ashton & Lee, 2008). Each subscale comprises of items that measure both the trait and the opposite of the trait (e.g. the sincerity scale has items that measure both sincerity and insincerity, with insincerity scores being reverse coded). Each item is measured on a 5-point Likert scale (1=Strongly Disagree, to 5=Strongly Agree).

The internal consistency reliability (coefficient alpha) for Honesty-Humility in the HEXACO-PI is .92 and the reliabilities of the four facets were also high: Sincerity (.79), Fairness (.85), Greed-Avoidance (.87) and Modesty (.83) (Lee & Ashton, 2004).

3.5.2 Conscientiousness

The HEXACO personality scale was used to measure the personality trait of conscientiousness (10 items) (Ashton & Lee, 2008). The internal consistency reliability for conscientiousness in the HEXACO-PI is .89 (Lee & Ashton, 2004). Furthermore Lee and Ashton (2004) found adequate reliability values were also found for the four dimensions of conscientiousness: Organisation (.85), Diligence (.79), Perfectionism (.79) and Prudence (.78).

3.5.3 Agreeableness

The HEXACO personality scale was used to measure the personality trait of agreeableness (Ashton & Lee, 2008). The 10-item HEXACO agreeableness facet was conceptualised as having four dimensions, namely Forgiveness, Gentleness,

Flexibility and Patience. The internal-consistency reliabilities (coefficient alpha) for Agreeableness, for both factor and facet levels are adequate. Reliability for the Agreeableness factor was .89, and for the facets, namely forgiveness (.88), gentleness (.77), flexibility (.75) and patience (.80) reliabilities were adequate as well (Lee & Ashton, 2004).

3.5.4 Emotionality

The HEXACO personality scale was used to measure the personality trait of emotionality (Ashton et al., 2004). The 10-item HEXACO emotionality dimension has four facets, namely Fearfulness, Anxiety/worry, Dependence, and Sentimentality. The internal-consistency reliabilities (coefficient alpha) for Emotionality, for the factor level is excellent. Reliabilities for the Emotionality factor was .90, and for the facets, namely fearfulness (.84), anxiety (.84), dependence (.85) and sentimentality (.81) were also good (Lee & Ashton, 2004).

3.5.5 Counterproductive Work Behaviour (CWB)

The 19-item Workplace Deviance Scale (WDS) developed by Bennett and Robinson (2000) was used to assess counterproductive work behaviours, including behaviours aimed at the organisation, such as theft, stealing, loafing at work or wasting time (termed CWB-O), as well as behaviours targeting individuals within the organisation, such as bullying, victimising and gossiping (termed CWB-I). The internal reliabilities for the CWB-O and CWB-I scales were .81 and .78, respectively (Bennett & Robinson, 2000).

3.5.6. Integrity

The measure used to assess integrity has been developed by Engelbrecht (Du Toit, 2015), which centres on measuring ethical integrity, also known as the Ethical Integrity Test (EIT). The EIT describes ethical integrity as acting in accordance with universally accepted ethical principles, values and norms. The test consists of five dimensions namely behavioural consistency, righteousness, frankness, credibility, and fairness. These dimensions are defined as follows (See Table 3.2):

Table 3.2 Ethical Integrity Test (EIT) dimensions.

Dimensions	Definitions
Behavioural consistency	Refers to behaving persistently in an ethical way; exhibits moral courage to behave consistently in adversity and temptation; and applies the same fundamental principles over time and to a variety of situations. The individual practises what he/she preaches despite of social and emotional pressures
Righteousness	Refers to behaving ethically and respectable; practising moral virtues and acts in terms of moral principles
Frankness	Refers to acting with truthfulness, authenticity and sincerity
Credibility	Refers to trustworthy, responsible, reliable and dependable behaviour in accordance with the ethical rules and norms of the organisation.
Fairness	Refers to treating people equitable and with dignity and respect, makes impartial and objective decisions, and does justice to all

(Du Toit, 2015)

The EIT is made up of 66 items in total where each dimension has a certain amount of items intended to measuring that specific dimension. The items breakdown is as follows (See Table 3.3)

Table 3.3: EIT items

Dimension	No of items	Example of item
Behavioural consistency	10	Item 5: I consistently behave in an ethical way Item 19: I practice what I preach
Righteousness	14	Item 20: I use my moral beliefs to make decisions Item 35: My behaviour is guided by sound principles
Frankness	14	Item 7: I shall tell the truth, even under pressure from others Item 16: People can believe what I say
Credibility	15	Item 22: People can depend on me Item 37: I keep promises that I make to others
Fairness	13	Item 23: My major concern is always what is best for the other person Item 28: I treat people with dignity and respect

(Du Toit, 2015)

The statistical analysis of the EIT produced positive results as indicated by the Cronbach's Alpha which is .971 for the entire scale. Each individual facet yielded the following Cronbach Alpha's: behavioural consistency: .736; credibility: .852; frankness: .912; fairness: .862 and righteousness: .911 (Du Toit, 2015). These coefficients exceed .70 and are therefore acceptable measures for integrity (Nunnally, 1978).

3.6 Statistical techniques

Various data analysis techniques were used to analyse data and examine the proposed structural model such item analysis, confirmatory factor analysis (CFA) and structural equation modelling (SEM).

3.6.1 Item Analysis

Item analysis looks at individual test items that may be faulty or that do not adequately represent a particular latent variable. It further assists in determining the internal consistency of items of a measurement instrument and in so doing eliminate poor items. The various scales and subscales had go through the process of item analysis via the SPSS reliability procedure to see if there were items that were not aligned to the internal consistency accounting for the scales and subscales being examined (Henning, Theron & Spangenberg, 2004). During the process of statistical analysis, item analysis was mainly used to detect items that did not clearly represent the sub-scale in question. It is with this in mind that item analysis can be used to create high validity and reliability in tests.

Based on Nunnally (1978) the below displayed measures are suitable to assess the reliability of the scales and subscales:

- .90 and above is excellent
- .80 - .89 is good
- .70 - .79 is adequate
- Below .70 may have limited applicability.

Items that are considered as satisfactory should have a Cronbach alpha above 0.70. (Nunnally, 1978). Consequently, the Correlated Item-Total correlation was also looked at, because it points out the extent to which an item correlates with the total score. .

Values that are greater than .20 could show an item measuring a particular latent variable and ones lower could specify the opposite (Nunnally, 1978).

3.6.2 Confirmatory factor analysis

The structural fit indices are inferred against the fitted structural model if it can be proven whether the indicator variables used to operationalise latent variables when the structural model is fitted successfully, exhibit or display the latent variables they stand for. The measurement model that is used to operationalise the structural model must be assessed before the structural model fitting. The fitting of the measurement model was done by investigating and analysing the covariance matrix. To confirm the multivariate normality, maximum likelihood estimation was utilised for before or after normalisation. Failure to achieve multivariate normality through normalisation in the observed data, the process of robust maximum likelihood estimations was utilised. The LISREL 8.80 was used for analysis in this study (Du Toit & Du Toit, 2001; Jöreskog & Sörbom, 2006).

The measurement hypothesis being evaluated is whether the measurement model provides a valid explanation of the process that produced the observed covariance matrix (Hair, Black, Babin, Anderson & Tatham, 2006). Therefore the measurement hypothesis explains that the measurement model gives a valid explanation on the way in which the latent variables are displayed in the indicator variables.

Confirmatory factor analysis is a better option to use for structural equation modelling than the traditional exploratory factor analysis technique (Kelloway, 1998). In view of SEM, confirmatory factor analysis is used for evaluating hypotheses based on the structure of the underlying latent variables (Pallant, 2007). In order to validate the measurement model it should be ascertained that the various indicators theorised successfully measure the latent variables. The CFA was performed via LISREL 8.80. According to Kline (2011) the p-value for close fit $>.05$ and RMSEA of $<.80$ is indicative of an acceptable model fit. The analysis derived via LISREL, the modification indices and other coefficients, are used to improve the fit of the model (Kelloway, 1998). The measurement model estimations are satisfactory if the measurement model fits the data. Thus, the latent variables operationalisation is seen as successful and the fitting

of the structural model can be done from which the exact or close fit is evaluated (Theron, 2012).

3.6.3 Structural Equation Modelling

Structural Equation Modelling (SEM) provides a broad and appropriate framework for statistical analysis that contains numerous traditional multivariate procedures such as factor analysis, regression and discriminant analysis (Kelloway, 1998). SEM has become a preferred technique for researchers across disciplines and researcher in the social sciences field progressively make use of it (Hooper, Coughlan & Mullen, 2008).

For this study structural equation modelling (SEM) was applied to fit the structural model and to ascertain that the structural relationships are a true representation of what is depicted in the measurements in the model between latent variables and that the estimations are correct. The measurement and structural model we assessed using the LISREL 8.80 software. Causal relationships are identified via structural modelling that exist between the different latent variables (Jöreskog & Sörbom, 1996).

Confirmatory factor analysis (CFA) via SEM was used to assess the measurement qualities specifically the validity of the observed variables. PRELIS functionality in LISREL 8.80 was used to test the multivariate normality and the below interdependent phases we used to perform the analysis (Kelloway, 1998):

Model specification;

1. Evaluation of model identification;
2. Estimation of model parameters;
3. Testing model fit; and
4. Model re-specification.

Model specifications assist in explaining the model parameters to be estimated in the actual model. This is done by creating a path diagram that elucidating the substantive hypotheses and measurement method. The process of model identification entails

analysing the data to see if there is existence of values for the freed parameter in the model, upon identification of the model an estimation procedure is chosen. The model identification technique is agreed on by the distributional properties and makeup of the variables being examined (Kelloway, 1998)

It is vital to assess the measurement model on the total sample in order to ascertain the goodness of fit before the structural paths are added (Jöreskog & Sörbom, 1996). For future research to be conducted on the study based on the construct evaluated the structural model must fit well. In order for the structural model to fit well, the construct must be established in a wider nomological network in which the latent variables are assessed via SEM. Therefore if the structural model fits closely the construct validity will be reasonably conclusive (Theron, 2012).

3.6.4 Structural equations

$$\eta_1 = \gamma_{11}\xi_1 + \gamma_{12}\xi_2 + \gamma_{13}\xi_3 + \gamma_{14}\xi_4 + \zeta_1$$

$$\eta_2 = \beta_{21} \eta_1 + \gamma_{21}\xi_1 + \zeta_2$$

3.6.5 The structural model in matrix form

$$\begin{pmatrix} \eta_1 \\ \eta_2 \end{pmatrix} = \begin{pmatrix} 0 & 0 \\ \beta_{21} & 0 \end{pmatrix} \begin{pmatrix} \eta_1 \\ \eta_2 \end{pmatrix} + \begin{pmatrix} \gamma_{11} & \gamma_{12} & \gamma_{13} & \gamma_{14} \\ \gamma_{21} & 0 & 0 & 0 \end{pmatrix} \begin{pmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \\ \xi_4 \end{pmatrix} + \begin{pmatrix} \zeta_1 \\ \zeta_2 \end{pmatrix}$$

3.6.6 Theoretical model of the structural relationships

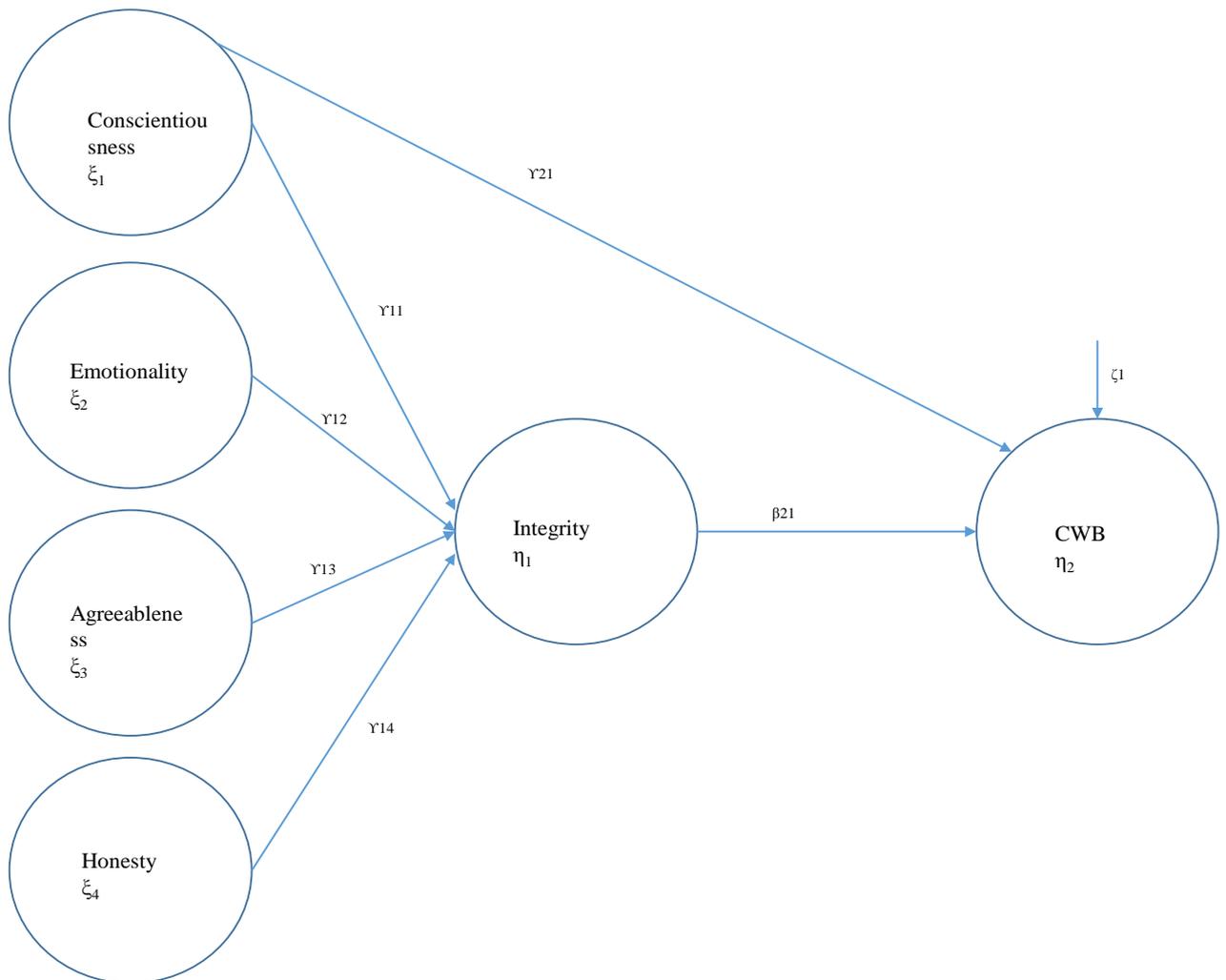


Figure 3.1: The structural model representing the relationships between personality, integrity and counterproductive work behaviour with LISREL symbols.

3.6.7 Statistical hypotheses

An overarching research hypothesis would mean that the structural model gives a good account of the way that employees' personality traits such as conscientiousness, agreeableness, emotionality and honesty-humility determine their integrity, which in

turn influences an employee's proneness to engage in counterproductive work behaviour. The initial step is to point out the statistical hypothesis that represents the exact model fit. The exact fit is tested by the Satorra-Bentler Scaled Chi-square and the close fit hypothesis is tested by the Root Mean Square Error of Approximation (RMSEA). The substantive research hypothesis translates into the following exact fit null hypothesis:

$$H_{01}: \text{RMSEA} = 0$$

$$H_{a1}: \text{RMSEA} > 0$$

However, if an exact fit is not possible one can try a close fit. Therefore, the following null hypothesis of a close fit will be tested. The substantive research hypothesis translates into the following close fit null hypothesis:

$$H_{02}: \text{RMSEA} \leq 0.05$$

$$H_{a2}: \text{RMSEA} > 0.05$$

In addition to the overall fit hypotheses, the following specific path coefficient hypotheses were formulated and tested to determine if the model fits the data:

Hypothesis 3: Conscientiousness (ξ_1) negatively affects counterproductive work behaviour (η_2).

$$H_{03}: \gamma_{21} = 0$$

$$H_{a3}: \gamma_{21} < 0$$

Hypothesis 4: Conscientiousness (ξ_1) positively affects integrity (η_1).

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

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

Hypothesis 5: Agreeableness (ξ_2) positively affects integrity (η_1).

$$H_{05}: \gamma_{12} = 0$$

$$H_{a5}: \gamma_{12} > 0$$

Hypothesis 6: Emotionality (ξ_3) negatively affects integrity (η_1).

$$H_{06}: \gamma_{13} = 0$$

$$H_{a6}: \gamma_{13} < 0$$

Hypothesis 7: Honesty-Humility (ξ_4) positively affects integrity (η_1).

$$H_{07}: \gamma_{14} = 0$$

$$H_{a7}: \gamma_{14} > 0$$

Hypothesis 8: Integrity (η_1) negatively affects counterproductive work behaviour (η_2).

$$H_{08}: \beta_{21} = 0$$

$$H_{a8}: \beta_{21} < 0$$

Table 3.4: The Statistical hypotheses

Hypothesis 3	Hypothesis 4	Hypothesis 5
$H_{03}: \gamma_{21} = 0$	$H_{04}: \gamma_{11} = 0$	$H_{05}: \gamma_{12} = 0$
$H_{a3}: \gamma_{21} < 0$	$H_{a4}: \gamma_{11} > 0$	$H_{a5}: \gamma_{12} > 0$
Hypothesis 6	Hypothesis 7	Hypothesis 8
$H_{06}: \gamma_{13} = 0$	$H_{07}: \gamma_{14} = 0$	$H_{08}: \beta_{21} = 0$
$H_{a6}: \gamma_{13} < 0$	$H_{a7}: \gamma_{14} > 0$	$H_{a8}: \beta_{21} < 0$

3.7 EVALUATION OF MODEL IDENTIFICATION

3.7.1 Variable type

It is important to decide whether individual items should continue to be treated as indicator variables or whether item parcels must be created. It is however important to highlight the pros and cons of creating item parcels.

The process of item parcelling is a data analysis technique for data problems such non-normality, unstable parameter estimates and small sample size. SEM needs normally distributed continuous observed variable to yield reliable and valid results. Item parcel are better at estimating normally distributed continuous variables when used as indicators of latent variables as opposed to single items. Item parcelling

basically entails creating new variables to improve estimation of normally distributed continuous variables therefore lowering the alteration of model parameter estimations. Item parcels tend to ascertain assumptions of maximum likelihood estimation than single items are. Furthermore, item parcels aids in changing normal data into continuous data

There is a distinct benefit of using item parcels in SEM than single items and this is due to the fact that combined item parcel scores presents better and more reliable output than scores from single items. According to Dunbar-Isaacson (2006) item parcels have lesser kurtosis and skewness as well as high validity. Model-fit indices like the Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), as well as the Chi-Square Test, tends to improve as the number of item parcels increases. Model-fit indices, only increases with items that have a unidimensional structure.

3.7.2 Interpretation of structural model fit and parameter estimates

3.7.2.1 Testing model fit

The fit of the model indicates how well or to what extent the hypothesised model fits with data. Basically implying the process through which covariance matrix is evaluated and compared to the sample covariance matrix to verify the closeness between the two covariance matrices (Diamantopoulos & Siguaw, 2000). The main objective of SEM is to ascertain how well or closely the model fits data of the primary theory in the study, therefore a number of fit indices are used to evaluate the model fit. The three classifications normally used are absolute, comparative and parsimonious fit indices (Kelloway, 1998). The evaluation of the absolute fit of the model focusses on how the model will reproduce the actual covariance matrix. The evaluation of the comparative fit of the model can further be divided into assessing the comparative and parsimonious fit. While the comparative fit measures two or more opposing or competing models in order to ascertain which model better fits the data, the parsimonious fit looks at how one can get a better fitting model by assessing and

estimating more parameters. Even though these indices can be beneficial when comparing two models these are not the most vital indices to take into account when assessing the fit of the model. For the aforementioned reason the parsimonious fit will not be discussed in this study.

The LISREL programme version 8.80 (Jöreskog & Sörbom, 2006), gives a variety of goodness-of-fit indices for measuring absolute and comparative model fit.

3.7.2.2 Absolute fit indices

The chi-square statistic

The chi-square is normally used to assess the complete model fit by confirming the congruence and incongruence between the actual and reproduced covariance matrices. It gives an indication on the test for perfect fit in determining how well the model represents the population data and it is also used to test the exact fit null hypothesis (H_{01}). This means that any inconsistency between the observed and reproduced covariance matrices in the population sample can be because of a sampling error under the exact fit null hypothesis. A good model fit is when a non-significant chi-square value (supposing a .05 significance level) will depict a good model fit. The null hypothesis of exact fit is, however, unrealistic, and therefore it is more appropriate to assess the p-value for the test of close fit ($RMSEA < 0.05$).

3.7.2.3 Root mean square error of approximation (RMSEA)

The RMSEA is the indicator on closeness of fit and is also regarded as one of the most informative fit indices. RMSEA values less than .05 show a good fit the ones .05 and .08 are reasonable fit, values between .08 and .10 indicate mediocre fit and those above .10 indicate poor fit (Diamantopoulos & Siguaw, 2000).

3.7.2.4 Root mean square residual (RMR) and standardised root mean square residual (SRMR)

The LISREL program also provides the root mean squared residual (RMR), summarising the measure of fitted residuals and the average of the variation between sample covariance and fitted covariance. The downside of interpreting the fitted residuals is mainly due to the fact that the size of the unit of measurement differs and the RMR differs from variable to variable one can fix this concern by focusing on the standardised residuals, being the fitted residuals divided by the estimated standard errors. A summary measure of standardised residuals is the standard RMR; values below .05 are indicative of good fit (Diamantopoulos & Siguaw, 2000).

3.7.2.5 The goodness-of-fit index (GFI)

The goodness of fit index (GFI) looks at the significant number of variances and covariances in the model and how closely the model gets to reproduce the observed covariance matrix. An acceptable fit would be interpreted by a GFI ranging between the values of 0 and 1 and values greater than .90 (Diamantopoulos & Siguaw, 2000).

3.7.2.6 Relative fit indices

Based on Kelloway (1998) relative fit indices also referred to as the comparative fit indices looks at how compatible the model is in relation to other models, or if the model is better than other models.

3.7.2.7 The normed fit index

The normed fit index (NFI) assesses the proposed model through matching the model's chi square value to the chi square value of the independent model (Bentler, 1990). A good NFI has a cut of value of $\geq .95$ (Hu & Bentler, 1999).

3.7.2.8 The non-normed fit index (NNFI)

When including the degrees of freedom into the model the NNFI changes or adjust NFI (Tabachnick & Fidell, 2001). To determine a good fit one would at a NNFI of $\geq .95$.

3.7.2.9 The comparative fit index (CFI)

In order of evaluating the fit in relation to other models one focusses on the comparative fit index. According to Diamantopoulos & Siguaaw (2000) a CFI value greater than .90 show an acceptable fit and a good fit is regarded if the CFI is greater than or equal to .95 (Hu & Bentler, 1999).

The goodness-of-fit indices as described above are summarised in Table 3.4. These indices were used for the purpose of reaching a meaningful conclusion regarding model fit.

Table 3.5

Criteria of goodness-of-fit indices

Absolute fit measures	Criteria
Minimum fit function Chi-Square	A non-significant result indicates good model fit.
χ^2/df	Values between 2 and 5 indicate good fit
Root Mean Square Error of Approximation (RMSEA)	Values of 0.08 or below indicate acceptable fit, those below 0.05 indicate good fit, and values below 0.01 indicate outstanding fit.
P-Value for Test of Close Fit (RMSEA < 0.05)	Values > 0.05 indicate good fit.
90% Confidence Interval for RMSEA	This is a 90% confidence interval of RMSEA testing the closeness of fit (i.e., testing the hypothesis $H_0: RMSEA < 0.05$).
Root Mean Square Residual (RMR)	Lower values indicate better fit, with values below 0.08 indicative of good fit.
Standardised RMR	Lower values indicate better fit, with values less than 0.05 indicating good fit.
Goodness of Fit Index (GFI)	Values closer to 1 and > 0.90 represent good fit.
Comparative fit measures	Criteria
Normed Fit Index (NFI)	Values closer to 1 indicate better fit, with values > 0.90 indicative of acceptable fit and > 0.95 of good fit.
Non-Normed Fit Index (NNFI)	Higher values indicate better fit, with values > 0.90 indicative of acceptable fit and > 0.95 of good fit.
Comparative Fit Index (CFI)	Values closer to 1 indicate better fit, with values > 0.90 indicative of acceptable fit and > 0.95 indicative of good fit.

Incremental Fit Index (IFI)	Values closer to 1 indicate better fit, with values > 0.90 indicative of acceptable fit and > 0.95 of good fit.
Relative Fit Index (RFI)	Values closer to 1 indicate better fit, with values > 0.09 indicative of acceptable fit and > 0.95 of good fit.

(Diamantopoulos & Sigaw, 2000; Hooper et al., 2008; Kelloway 1998)

3.8 Summary

Chapter 3 concentrated on expanding the design and methodology for the research process. This encompassed an explanation of the applied research design; formulating the hypotheses; the sample design and features; measuring instruments information; and the data collection process. Lastly, a summary of the various statistical techniques used to analyse and examine the data and to establish the model fit were presented. The data analyses and the presentation of the results is discussed in Chapter 4.

CHAPTER 4

RESEARCH RESULTS

4.1 Introduction

The main objective of this chapter is to present and discuss the theoretical model representing the relationships among selected personality traits, integrity and counterproductive work behaviour (CWB). Based on the literature study in chapter 2, hypotheses were postulated. These hypotheses including the measurement and structural models were examined by use of structural equation modelling methodology explained in Chapter 3. Chapter 4 displays the results attained through the data by using statistical analysis procedure previously elucidated on.

The various measurement models of the latent variables in the structural model were examined by conducting reliability analyses, including goodness-of-fit analysis using CFA. The structural model looking at the various relationships between the constructs was statistically analysed to test the hypotheses. This current chapter gives evidence of the outcomes of the statistical analyses of all the models.

4.2 Missing values

Participants had to complete an online questionnaire that allowed participants to continue to the next question only if the previous one was answered or completed. Thus in this study missing values were not a major and significant problem as only fully filled out and completed questionnaires were utilised for analysis. LISREL 8.80 was used through the multiple imputation functionality to deal with missing values in the few hard copies.

4.3 Item analysis

SPSS was used to perform the item analysis on all measurement scales so as to ascertain internal reliability and to detect all items that did not provide a true internal explanation of the latent variables. Item analysis is vital because it confirms that the identified measuring instruments give a true reflection of the latent variable that they are intended to measure. The Cronbach alpha was used as indicator to measure the reliability of every subscale of the different measuring instruments. According to Pallant (2010) the reliability of the scale is confirmed if the Cronbach's alpha values exceeds the value of .70. Thus, Cronbach's alpha values of .70 and above were indicated as satisfactory and consequently any item in the measurement scales with values lower than .70 were eligible for deletion or elimination.

The evaluation of the Corrected Item-Total Correlation portrays the extent to which the respective items correlates with the total score. Values lower than .20 could imply that the item is not measuring the particular construct (Nunnally, 1978). Thereof, elimination of such items should be considered because this could lead to the Cronbach's alpha being higher for the whole scale.

4.3.1 Personality Questionnaire Reliability analysis

Four subscales of the HEXACO were used in this study, namely honesty-humility, agreeableness, conscientiousness and emotionality. Every subscale underwent item analysis.

4.3.1.1 Honesty-Humility: Reliability results

The Honesty-Humility subscale of the HEXACO comprises of ten items. The subscale's Cronbach's alpha was .533, which is an inadequate or unsatisfactory reliability value based on Nunnally (1967; 1978). All items had an item-total correlation above the recommended cut-off value of .20 other than items c4 (.156), c6 (.173), and

c8 (.004). The item-total correlation of item c3 (.218) was also relatively low (Pallant, 2007). Thus it was decided to eliminate the poor items. The reliability results of the revised honesty-humility subscale are depicted in Table 4.1. The Cronbach's alpha improved to 0.736 after the deletion of the problematic items, and this result is adequate (Nunnally, 1967). As can be seen every item's Corrected Item-Total Correlations is above the suitable level of 0.20, showing that the items correlate reasonably with the total score of the subscale (Nunnally, 1978).

Table 4.1

Revised Honesty-Humility subscale: Reliability and Item-Total statistics

Reliability Statistics					
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items			
.736	.739	6			

Item-Total Statistics					
Adjust Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
cR2	18.75	14.921	.468	.255	.700
cR5	19.00	15.234	.478	.281	.698
cR7	19.65	15.290	.437	.267	.709
cR9	18.54	15.373	.525	.330	.687
cR10	19.42	14.980	.440	.220	.709
cR11	19.37	14.597	.494	.325	.693

4.3.1.2 Conscientiousness: Reliability results

Table 4.2 below displays the reliability results for the Conscientiousness subscale of the HEXACO scale, consisting of ten items. The Cronbach's alpha for the subscale was .703, thus being an adequate reliability value as prescribed by Nunnally (1967). Majority of the items obtained an item-total correlation above the recommended cut-off value of .20 except for items c18 (.082), and c21 (.196). It was decided to delete item c18 since this item was the most problematic.

As displayed in table 4.2 the reliability output of the revised conscientiousness subscale can be viewed. Upon removal of the poor item the Cronbach's alpha coefficient improved to 0.724, which is adequate (Nunnally, 1967). The cut-off level of above 0.20 for all items' Corrected Item-Total Correlations was attained (Nunnally, 1967).

Table 4.2

Reliability and Item-Total statistics of the revised Conscientiousness scale

Reliability Statistics					
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items		
	.724	.728	9		

Item-Total Statistics					
Adjust Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
c14	29.67	21.982	.357	.327	.707
c15	29.43	23.140	.280	.318	.719
c21	30.08	21.666	.377	.200	.704
cR13	29.83	21.273	.436	.279	.693
cR16	29.71	20.570	.515	.399	.679
cR17	29.94	20.058	.546	.356	.672
cR19	29.47	20.675	.537	.401	.676
cR20	30.04	21.113	.427	.340	.695
cR22	29.67	21.982	.357	.327	.707

4.3.1.3 Agreeableness: Reliability results

The HEXACO's Agreeableness subscale reliability analysis is depicted in table 4.3, the subscale is made up of ten items. The subscale's Cronbach's alpha was .670, thus missing the .70 reliability value cut-off as prescribed by Nunnally (1967). All items obtained an item-total correlation above the recommended value of .20 other than items c38, and c41. It was thus decided to eliminate the problematic items.

The revised Agreeableness subscale reliability output is displayed in table 4.3. The Cronbach's alpha coefficient improved to 0.687 after the deletion of the problematic

items, which marginally missed the .70 reliability value cut-off (Nunnally, 1967). As can be seen all items' Corrected Item-Total Correlations were above the recommended level of 0.20, thus portraying a satisfactory correlation of the items with the total score of the subscale

Table 4.3

Revised Agreeableness subscale Reliability and Item-Total statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.687	.683	8

Item-Total Statistics					
Adjust Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
c35	23.18	16.591	.466	.434	.635
c36	23.01	17.292	.423	.397	.647
c39	23.41	18.730	.275	.150	.679
c44	23.04	19.149	.225	.111	.689
cR37	23.30	18.266	.303	.201	.674
cR40	23.72	17.263	.354	.234	.663
cR42	23.04	17.286	.450	.288	.641
cR43	23.06	16.102	.516	.339	.622

4.3.1.4 Emotionality: Reliability results

Table 4.4 shows the reliability outcomes for the Emotionality subscale of the HEXACO made up of ten items. The Cronbach's alpha of the subscale was 0.645 thus being an inadequate reliability as per Nunnally (1967). All items displayed an item-total correlation above the recommended value of .20 other than the items of cR28 and

CR30. It was decided to flag these reversed scored items as possible problematic items that should be taken into consideration in further analyses of this subscale. Table 4.4 illustrates the reliability output of the Emotionality subscale.

Table 4.4

Reliability and Item-Total statistics of the Emotionality subscale

Reliability Statistics					
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items	
	.645	.642		10	

Item-Total Statistics					
Adjust Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
c24	28.77	23.416	.289	.344	.625
c25	28.53	23.489	.319	.354	.618
c27	28.33	23.584	.312	.199	.619
c29	29.05	22.940	.331	.210	.615
c31	28.61	21.469	.505	.395	.576
c32	28.37	21.852	.476	.384	.583
cR26	28.85	24.417	.215	.162	.639
cR28	28.72	25.451	.132	.135	.654
cR30	29.30	24.956	.170	.113	.648
cR33	28.52	23.2680	.354	.218	.611

4.4 Reliability analysis of the CWB scale

The Workplace Deviance Scale consists of 19 items contained in two subscales namely CWB-Individual Deviance (CWB - ID) and CWB-Organisational Deviance (CWB - OD). Every subscales was thoroughly examined through item analysis.

4.4.1 Reliability results: CWB - ID

The CWB - ID subscale of the CWB scale, comprising of seven items, resulted in an adequate Cronbach's alpha of .778, as depicted in Table 4.5. This value is very satisfactory because it is above the prescribed value of .70 (Nunnally, 1967). No item was flagged for removal as all the items displayed item-total correlations above .20. Hence, the outcome of the item analysis did not show any red flags regarding the CWB - ID subscale.

Table 4.5

Reliability and Item-Total statistics of the CWB ID subscale

Reliability Statistics					
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items		
	.778	.801	7		

Item-Total Statistics					
Adjust Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
d1	8.62	13.440	.401	.191	.788
d2	9.53	13.826	.643	.441	.723
d3	9.53	14.241	.472	.262	.757
d4	9.70	14.673	.510	.325	.749
d5	9.69	14.641	.514	.316	.748
d6	9.50	14.233	.571	.373	.737
d7	9.94	16.023	.558	.384	.753

4.4.2 Reliability results: CWB OD

The CWB - OD subscale of the CWB scale, which is made up of twelve items, resulting in very a high Cronbach's alpha of .912, as displayed in Table 4.6. The value was above the recommended value of .70 and thus very satisfactory (Nunnally, 1967). None of the items were identified poor items as all items displayed item-total correlations above .20. The item analysis results regarding the reliability of the CWB –OD subscale was satisfactory.

Table 4.6

Reliability and Item-Total statistics of the CWB - OD subscale

Reliability Statistics					
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items	
	.912	.928		12	

Item-Total Statistics					
Adjust Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
d8	14.52	35.295	.719	.595	.902
d9	14.15	34.119	.621	.479	.906
d10	14.63	35.960	.756	.848	.902
d11	14.11	34.697	.576	.418	.908
d12	14.29	34.411	.643	.510	.905
d13	14.49	35.791	.604	.517	.906
d14	14.42	35.050	.723	.580	.901
d15	14.30	33.432	.735	.612	.900
d16	14.56	35.381	.695	.671	.903

d17	14.64	36.478	.805	.881	.902
d18	14.19	32.514	.542	.381	.918
d19	14.61	35.231	.799	.850	.900

4.4.3. Reliability results: Integrity Consistency subscale

The 10-item consistency subscale of the Ethical Integrity Test (EIT) resulted in an adequate Cronbach's alpha of .703. All the items (with the exception of item b54) indicated item-total correlations of above .20. A decision was made to delete item b54 since this item was regarded problematic.

Table 4.7 exemplifies the reliability output of the revised consistency subscale. Once the problematic item was deleted the Cronbach's alpha coefficient value improved to .805, which is good (Nunnally, 1967). The suitable level for all items' Corrected Item-Total Correlations was above 0.20 (Nunnally, 1967).

Table 4.7

Reliability and Item-Total statistics of the revised Integrity Consistency subscale

Reliability Statistics					
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items	
	.805	.819		9	

Item-Total Statistics					
Adjust Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
b5	34.04	13.552	.492	.278	.787
b14	34.22	13.122	.473	.279	.790
b19	34.19	13.145	.547	.421	.780
b24	34.40	13.578	.299	.130	.821
b29	33.98	13.119	.668	.521	.768
b34	34.06	12.753	.706	.597	.762

b39	34.05	12.843	.671	.542	.766
b44	33.77	14.301	.318	.246	.808
b49	33.86	13.534	.464	.330	.791

4.4.4 Reliability results: Fairness subscale

The Fairness subscale is made up of 13 items and showed very satisfactory Cronbach's alpha of .862. No problematic items were flagged as per the item-total correlations as value for all items was above 0.20. No concerns were raised via item analysis for the Fairness subscale as the results depict in Table 4.8.

Table 4.8

Reliability and Item-Total statistics of the Fairness subscale

Reliability Statistics					
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items	
	.862	.875		13	

Item-Total Statistics					
Adjust Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
b4	50.13	29.519	.376	.201	.861
b9	50.15	29.606	.546	.354	.851
b13	50.69	28.304	.490	.392	.855
b18	50.47	27.861	.594	.406	.847
b23	50.78	28.046	.460	.333	.858
b28	50.03	29.681	.543	.374	.852
b33	50.16	28.470	.640	.502	.846
b38	50.30	27.947	.585	.382	.848
b43	50.81	28.529	.381	.292	.865

b48	50.19	29.001	.604	.501	.848
b53	50.28	28.724	.627	.547	.847
b58	50.17	28.674	.682	.574	.844
b62	50.09	29.394	.579	.465	.850

4.4.5 Reliability results: Righteousness subscale

The 14-item Righteousness subscale of the Ethical Integrity Test (EIT) resulted in an excellent Cronbach's alpha of .915 as it is above the required cut-off level of .70. The item-total correlations above .20 was visible in all items as depicted in Table 4.9.

Table 4.9

Reliability and Item-Total statistics of the Righteousness subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.915	.922	14

Item-Total Statistics					
Adjust Items	Scale Mean if Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
b1	55.90	34.743	.383	.205	.922
b6	55.86	33.980	.676	.529	.907
b10	55.90	34.539	.608	.434	.909
b15	55.85	34.287	.655	.465	.908
b20	55.95	34.006	.676	.502	.907
b25	55.77	36.065	.441	.222	.915
b30	56.41	34.490	.422	.239	.919
b35	55.94	33.736	.763	.648	.904
b40	55.87	35.059	.563	.352	.911
b45	55.90	33.534	.796	.662	.903

b50	55.92	33.640	.747	.632	.905
b55	55.99	33.035	.794	.670	.903
b59	55.90	33.560	.760	.618	.904
b63	55.82	33.830	.768	.657	.904

4.4.6 Reliability results: Credibility subscale

The Credibility subscale of the EIT consists of 15 items and brought about a Cronbach's alpha of .875, which is good based on Nunnally (1967). No problematic items were found as the items all indicated item-total correlations of over .20. The results are displayed in Table 4.10.

Table 4.10

Reliability and Item-Total statistics of the Credibility subscale

Reliability Statistics					
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items	
	.875	.886		15	

Item-Total Statistics					
Adjust Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
b3	60.65	34.796	.318	.176	.878
b8	60.49	34.366	.488	.403	.869
b12	60.35	34.777	.558	.500	.867
b17	60.56	33.983	.532	.472	.867
b22	60.54	33.568	.642	.505	.863
b27	60.83	34.202	.337	.209	.879
b32	60.55	33.452	.601	.441	.864
b37	60.74	33.049	.649	.613	.862
b42	60.80	32.965	.650	.659	.862

b47	60.69	33.234	.587	.563	.864
b52	60.60	33.188	.692	.570	.861
b57	60.67	33.356	.592	.428	.864
b61	60.77	33.549	.574	.390	.865
b64	60.96	33.357	.385	.265	.878
b66	60.74	33.032	.563	.393	.865

4.4.7 Reliability results: Frankness subscale

The Frankness subscale of the EIT consists of 14 items and brought about a Cronbach's alpha of .889, which is good based on Nunnally (1967). No problematic items were found as the items all indicated item-total correlations of over .20. The results are displayed in Table 4.11.

Table 4.11

Reliability and Item-Total statistics of the Frankness subscale

Reliability Statistics					
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items	
	.889	.895		14	

Item-Total Statistics					
Adjust Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
b2	57.28	29.042	.572	.420	.882
b7	57.04	29.148	.618	.470	.879
b11	56.90	29.619	.689	.543	.877
b16	56.98	30.084	.583	.406	.881
b21	56.88	29.778	.712	.572	.876
b26	56.74	30.788	.602	.519	.881
b31	56.84	29.925	.708	.590	.877

b36	56.88	31.406	.316	.193	.894
b41	56.63	31.747	.377	.239	.889
b46	56.86	30.591	.423	.228	.889
b51	57.04	29.167	.686	.531	.876
b56	57.06	29.341	.714	.631	.875
b60	57.15	29.364	.605	.537	.880
b65	57.20	29.168	.513	.361	.886

4.5 Summary of the item analysis results

Nearly all the Cronbach's alpha values exceeded the required cut-off point of .70 after all scales and subscales were subject to item analysis to eliminate the problematic items. All the revised scales achieved a Cronbach's alpha value that exceeds the .60 level, which is regarded as acceptable for research purposes (Malhotra, 2004). The revised scales and items showed improved and high item-total correlations. The problematic items were removed through item analysis. Thus the internal consistency and reliability of every final scale is confirmed. The final results of the item analyses are outlined in Table 4.12.

Table 4.12

Summary of the item analyses results

Scale	Mean	Std deviation	Cronbach's alpha	Number of items deleted	Number of items retained
Personality: Revised Honesty-Humility	22.95	4.540	.736	4	6
Personality: Revised Conscientiousness	33.57	5.131	.724	1	9
Personality: Revised Agreeableness	26.54	4.689	.687	2	8
Personality: Emotionality	31.89	5.281	.645	0	10
CWB: Interpersonal	11.08	4.354	.778	0	7
CWB: Organisational	15.72	6.416	.912	0	12
Integrity: Revised Consistency	38.32	4.058	.805	1	9

Scale	Mean	Std deviation	Cronbach's alpha	Number of items deleted	Number of items retained
Integrity: Fairness	54.52	5.776	.862	0	13
Integrity: Righteousness	60.23	6.275	.915	0	14
Integrity: Credibility	65.00	6.188	.875	0	15
Integrity: Frankness	61.34	5.868	.889	0	14

4.6 Evaluating the measurement models

Confirmatory Factor Analysis (CFA) was applied on all scales in this research study and the CFA was performed by the use of LISREL 8.80. The main reason for performing this analysis is to examine the goodness-of-fit between the measurement models and the obtained information by analysis the hypotheses of exact fit (H_{01} : RMSEA = 0) and close fit (H_{02} : RMSEA \leq 0.05).

The actual results of the CFA are deliberated on based on the Root Mean Square Error of Approximation (RMSEA). As emphasised by Diamantopoulos and Siguaaw (2000) a reasonable fit is distinguished by a RMSEA value of smaller than 0.08 showing a reasonable model fit; while a good fit is identified by RMSEA values smaller than 0.05. The outcome of results provides guidance on whether the measurement model attained status of good fit or fitted poorly based on the RMSEA. While focussing on the model fit the factor loadings were also examined by considering the Completely Standardised LAMBDA-X matrices. Whenever values are above 0.50 it is indicative that the items are loading satisfactorily onto the latent variables.

Based on the outcome of the initial results, on determining whether the model fit was poor or good, the modification indices were examined, in case of a poor fit to ascertain the likelihood of increasing the model fit.

In instances where the model fits poorly, one can improve the model fit by freeing up model parameters (Diamantopoulos & Siguaw, 2000). This is normally done by focusing on the THETA-DELTA modification indices. Theta-delta describes the variance or inconsistency when looking at measurement. Theta-delta focusses on the variance in the observed variable not explicated by the latent variables that is related to it, however by systematic latent variables or random error. Large modification index values (i.e. > 6.64 at a significant level of 0.01), freeing parameters could possibly enhance the model fit (Diamantopoulos & Siguaw, 2000; Jöreskog & Sörbom, 1996). Once identification is done of items with high THETA-DELTA values, such items could be selected for elimination as per the loadings from the completely standardised LAMBDA-X matrices. Items with low factor loadings were deleted in the completely standardised LAMBDA-X matrices.

4.6.1 Evaluating the Measurement Model Fit of the Personality traits

The HEXACO assessment tool was used to measure the selected dimensions of personality. Once the measurement models of the subscales were evaluated, the four subscales (Agreeableness, Conscientiousness, Emotionality and Honesty-Humility) were analysed separately in the confirmatory factor analysis.

4.6.1.1 Evaluating the Measurement Model Fit of Emotionality subscale

The 10 items of the Emotionality subscale of the HEXACO were subjected to CFA. It was decided to allocate the positively worded items and the negatively worded (reversed scored) items into two separate factors. Even though the Emotionality scale has two fundamental features, focussing on the negative and positive phrasing of items, all the items were regarded as measures of the higher-order Emotionality factor (Mahembe, 2014, p.244).

The emotionality measure showed poor fit with the RMSEA of 0.0975 (> 0.08) after the analysis of the original fit statistics. Based on the large Theta-Delta value (> 6.64) of items c24 and c25, it was decided to remove item c25 as a poor item and to perform another CFA on the revised subscale. The revised measurement model of emotionality

displays an acceptable fit with a RMSEA of 0.060 (< 0.08) after examination of the fit statistics.

A standardised RMR value of 0.065 was found, but marginally missed the 0.05 cut-off indicative of good fit. The GFI (0.95), NNFI (0.91) and CFI (0.93) values were above 0.90, however the NFI (0.87) was below the cut-off. This is generally indicate acceptable model fit. The emotionality measurement model obtained reasonable fit based on the overall fit indices. It could therefore be concluded the emotionality measurement model offers an acceptable account and explanation of the observed covariance matrix.

Further inspection of the completely standardised factor loadings indicated that all, except two items loaded satisfactory (> 0.30) on the emotionality factor. Items c24 and cR30 loaded marginally below 0.30. This is displayed in Table 4.13.

Table 4.13

Revised Emotionality subscale's Completely Standardised Factor loadings

	NEG	POS
c24		0.291
c27		0.440
c29		0.419
c31		0.783
c32		0.704
cR26	0.448	
cR28	0.368	
cR30	0.287	
cR33	0.631	

4.6.1.2 Evaluating the Measurement Model Fit of Honesty-Humility subscale

After reliability analysis, the 6-item Honesty-Humility subscale of the HEXACO was subjected to CFA. Subsequent to examining the initial fit statistics, the Honesty-Humility measurement model shows poor fit with a RMSEA of 0.107 (> 0.08). Based on the large Theta-Delta value (> 6.64) of items cR7 and cR11, it was decided to remove item cR11 as a poor item and to perform another CFA on the revised subscale. Subsequently analysing the fit statistics, a good fit with a RMSEA of 0.000 (< 0.05) was observed for the revised measurement model of the Honesty-Humility.

A close fit is indicative of a P-value Test of Close Fit of 0.90. A standardised RMR value of 0.022 indicates a good fit. The GFI of 0.99 as well as the NNFI (0.99); NFI (0.99), CFI (0.99), values were above 0.95 indicating a good model fit. Consequently, the Honesty-Humility measurement model showed a good fit to the data based on the overall fit indices. Therefore, one can say that the Honesty measurement model gave an acceptable explanation of the observed covariance matrix.

Further inspection of the completely standardised factor loadings indicated that all items loaded satisfactory (> 0.30) on the Honesty-Humility factor. This is indicated in Table 4.14.

Table 4.14

Revised Honesty-Humility subscale's Completely standardised LAMBDA-X matrix

HONESTY-HUMILITY Items	
cR2	0.601
cR5	0.611
cR7	0.367
cR9	0.688
cR10	0.452

4.6.1.3 Evaluating the Measurement Model Fit of the Conscientiousness subscale

The 9 items (after reliability analysis) of the Conscientiousness subscale of the HEXACO were subjected to CFA. It was decided to split the positively worded items and the negatively worded (reversed scored) items into two separate factors. Two fundamental factors describe the Conscientiousness scale as per the positive and negative phrasing of the items, thus all items were regarded as measures of the higher-order Conscientiousness factor (Mahembe, 2014, p.244).

Upon analysis of the fit statistics, the Conscientiousness measurement model showed good model fit with a P-value Test of Close Fit of 0.73 and RMSEA = 0.0363. The RMR and Standardised RMR values of 0.0564 and 0.0531 respectively marginally missed the 0.05 cut-off level suggestive of good fit. The GFI of 0.96 as well as the NNFI (0.98); NFI (0.95), and CFI (0.99) values were above 0.95 showing good model fit. Consequently, the Conscientiousness measurement model showed a good fit to the data based on the overall fit indices. Therefore, one can say that the Conscientiousness measurement model gave a satisfactory account of the observed covariance matrix.

All items loaded satisfactorily (> 0.30) on the Conscientiousness factor based on further examination of the completely standardised factor loadings. This is displayed in Table 4.15.

Table 4.15

Conscientiousness subscale's Completely standardised LAMBDA-X matrix

CONSCIENTIOUSNESS	
Items	
C14	0.689
C15	0.708

C21	0.471	
cR13		0.463
cR16		0.585
cR17		0.700
cR19		0.637
cR20		0.688
cR22		0.603

4.6.1.4 Evaluating the Measurement Model Fit of Agreeableness subscale

The 10 items of the Agreeableness subscale of the HEXACO was subjected to CFA. It was decided to divide the positively worded items and the negatively worded (reversed scored) items into two different factors. Two fundamental factors describes the Agreeableness scale as per the positive and negative phrasing of the items, thus every item was regarded as a measure of the higher-order Agreeableness factor (Mahembe, 2014, p.244).

Upon analysis of the fit statistics, it seemed that the agreeableness measurement model exhibited reasonable fit with a RMSEA of 0.0628 (< 0.08). Further examination showed that all the items loaded satisfactory (> 0.30) on the agreeableness factor with the exception of items c38, c41 and c44. It was decided to delete these poor items and to perform another CFA. A good RMSEA value of 0.0165 was found for the revised scale.

The RMR and Standardised RMR values of 0.0405 and 0.0355 were indicative of good fit. The GFI of 0.98 as well as the NNFI (0.996); NFI (0.96), and CFI (0.998) values were above 0.95 suggestive of good model fit. Consequently, the Agreeableness measurement model showed a good fit to the data based on the overall fit indices. Therefore, one can say that the Agreeableness measurement model gave a satisfactory account of the observed covariance matrix. All items loaded satisfactorily (> 0.30) onto the Agreeableness factor based on further examination of the completely standardised factor loadings. This is indicated in Table 4.16.

Table 4.16***Agreeableness subscale's revised Completely standardised LAMBDA-X matrix***

AGREEABLENESS	POSITIVE	NEGATIVE
Items		
C35	0.887	
C36	0.673	
C39	0.405	
RC40		0.550
RC37		0.500
RC43		0.692
RC42		0.621

4.6.2 Evaluating the Measurement model of the CWB scale

The CWB scale and its two subscales were examined using CFA as to assess the fit of the measurement model. Upon analysis of the initial fit statistics, it seemed that the CWB measurement model displays poor fit with a RMSEA of 0.0832 (> 0.08). Based on the large Theta-Delta value (> 6.64) of item d11, a decision was made to remove the problematic item and perform another CFA on the revised scale. After inspecting the fit statistics, the revised measurement model of CWB presented a satisfactory fit with a RMSEA of 0.0785 (< 0.08).

The CWB scale goodness-of-fit indices stated in Table 4.17 shows that the model only depicts a reasonable fit as the RMR and Standardised RMR of 0.0503 and 0.0755 respectively (> 0.05), and the GFI of 0.81 (< 0.90) failed to meet the recommended values of good fit. The absolute fit indices were generally reasonable.

An acceptable fit was obtained as the overall outcome of the incremental fit indices were all above 0.90. As a result of this the measurement model showed reasonable fit with the data as indicated by overall fit indices. Therefore, one can say that the CWB measurement model gave a satisfactory account of the observed covariance matrix.

In Table 4. 17 a display of the factor loadings on the items is presented. All items loaded satisfactorily above 0.30 based on the completely standardised LAMBDA-X matrix.

Table 4.17

Revised CWB scale's Completely standardised LAMBDA-X matrix

CWB Items	LAMBDA-X	
	CWB	CWB
	ID	OD
d1	0.383	-
d2	0.629	-
d3	0.508	-
d4	0.511	-
d5	0.519	-
d6	0.599	-
d7	0.692	-
d8	-	0.597
d9	-	0.490
d10	-	0.849
d12	-	0.506
d13	-	0.574
d14	-	0.582
d15	-	0.622
d16	-	0.657
d17	-	0.842
d18	-	0.489
d19	-	0.799

4.6.3 Evaluating the Measurement model of the Integrity scale

After the reliability analysis, the measurement model of the integrity scale (65 items) indicated reasonable good model fit with an RMSEA value of 0.063 (< 0.08). A P-

value for the Test of Close fit of 0.00 was found. The p-value for test of close fit shows that the model does not show close fit to the data (< 0.05).

The Standardised RMR marginally missed the 0.05 recommended cut-off indicative of good fit. It, however, indicates reasonable fit. The GFI of 0.59 failed to meet the cut-off value of good fit. A good fit was obtained as the overall outcome of the incremental fit indices were all above 0.95. As a result of this the measurement model showed reasonable fit with the data as indicated by overall fit indices. Therefore, one can say that the Integrity measurement model gave a satisfactory account of the observed covariance matrix.

In Table 4. 18 a display of all factor loadings of the items on the dimension are presented. All items loaded satisfactorily and above 0.30 based on the completely standardised LAMBDA-X matrix.

Table 4.18

The revised Integrity's completely standardised factor loadings

INTEGRITY Items	LAMBDA-X				
	CONSIST	CREDIBL	FAIR	FRANK	RIGHT
b1	-	-	-	-	0.454
b2	-	-	-	0.600	-
b3	-	0.317	-	-	-
b4	-	-	0.454	-	-
b5	0.537	-	-	-	-
b6	-	-	-	-	0.715
b7	-	-	-	0.625	-
b8	-	0.502	-	-	-
b9	-	-	0.630	-	-
b10	-	-	-	-	0.616
b11	-	-	-	0.743	-
b12	-	0.587	-	-	-
b13	-	-	0.453	-	-

LAMBDA-X					
INTEGRITY Items	CONSIST	CREDIBL	FAIR	FRANK	RIGHT
b14	0.520	-	-	-	-
b15	-	-	-	-	0.683
b16	-	-	-	0.645	-
b17	-	0.563	-	-	-
b18	-	-	0.604	-	-
b19	0.629	-	-	-	-
b20	-	-	-	-	0.697
b21	-	-	-	0.747	-
b22	-	0.701	-	-	-
b23	-	-	0.459	-	-
b24	0.413	-	-	-	-
b25	-	-	-	-	0.471
b26	-	-	-	0.620	-
b27	-	0.366	-	-	-
b28	-	-	0.627	-	-
b29	0.775	-	-	-	-
b30	-	-	-	-	0.459
b31	-	-	-	0.733	-
b32	-	0.638	-	-	-
b33	-	-	0.673	-	-
b34	0.804	-	-	-	-
b35	-	-	-	-	0.813
b36	-	-	-	0.506	-
b37	-	0.701	-	-	-
b38	-	-	0.623	-	-
b39	0.794	-	-	-	-
b40	-	-	-	-	0.633
b41	-	-	-	0.421	-
b42	-	0.719	-	-	-
b43	-	-	0.431	-	-
b44	0.399	-	-	-	-
b45	-	-	-	-	0.820
b46	-	-	-	0.465	-
b47	-	0.695	-	-	-
b48	-	-	0.720	-	-
b49	0.519	-	-	-	-
b50	-	-	-	-	0.799

LAMBDA-X					
INTEGRITY Items	CONSIST	CREDIBL	FAIR	FRANK	RIGHT
b51	-	-	-	0.734	-
b52	-	0.787	-	-	-
b53	-	-	0.752	-	-
b55	-	-	-	-	0.835
b56	-	-	-	0.798	-
b57	-	0.700	-	-	-
b58	-	-	0.736	-	-
b59	-	-	-	-	0.785
b60	-	-	-	0.700	-
b61	-	0.635	-	-	-
b62	-	-	0.727	-	-
b63	-	-	-	-	0.815
b64	-	0.346	-	-	-
b65	-	-	-	0.571	-
b66	-	0.624	-	-	-

Note: Consist = Behavioural consistency; Credibl = Credibility, Fair = Fairness, Frank = Frankness, Right = Righteousness

Table 4.19

Goodness-of-Fit Indices Obtained for the Measurement and Structural Models

	<i>RMSEA</i>	<i>p_{close fit}</i>	<i>SRMR</i>	<i>GFI</i>	<i>NNFI</i>	<i>NFI</i>	<i>CFI</i>
Honesty-Humility	0.000	0.897	0.022	0.99	0.99	0.99	0.99
Conscientiousness	0.036	0.731	0.053	0.96	0.98	0.95	0.99
Agreeableness	0.017	0.807	0.036	0.98	0.996	0.96	0.998
Emotionality	0.059	0.267	0.065	0.95	0.91	0.87	0.93
CWB	0.079	0.00	0.076	0.81	0.95	0.92	0.95
Integrity	0.063	0.00	0.062	0.59	0.97	0.95	0.98
Overall measurement model	0.060	0.140	0.053	0.91	0.96	0.94	0.97
Structural model	0.059	0.182	0.053	0.92	0.97	0.94	0.97

Note. RMSEA = Root Mean Square Error of Approximation; Pclose fit = P-value for Test of Close Fit ($H_0: RMSEA < 0.05$); SRMR = Standardised Root Mean Residual; GFI = Goodness-of-fit index; NNFI = non-normed fit index; NFI = normed fit index CFI = Comparative fit index, * $p < .05$.

4.7 Fitting the overall Measurement Model

The overall measurement model was fitted by using random parcelling and subscales as parcels. The result was that the fitting of the overall measurement model was satisfactory with a RMSEA value of 0.0604 and a P-value for Close fit of 0.14 (see Table 4.19). Consequently, the overall measurement model attained close fit with the data ($p > 0.05$).

Thus the null hypothesis of exact fit could be rejected as a Satorra-Bentler Scaled Chi-Square of 136.787 ($p < 0.01$) was obtained. The χ^2/df ratio was calculated using the Satorra-Bentler Scaled Chi-Square divided by the degrees of freedom (75). The χ^2/df ratio of 1.8238 is slightly below the range of 2 – 5 indicating good fit.

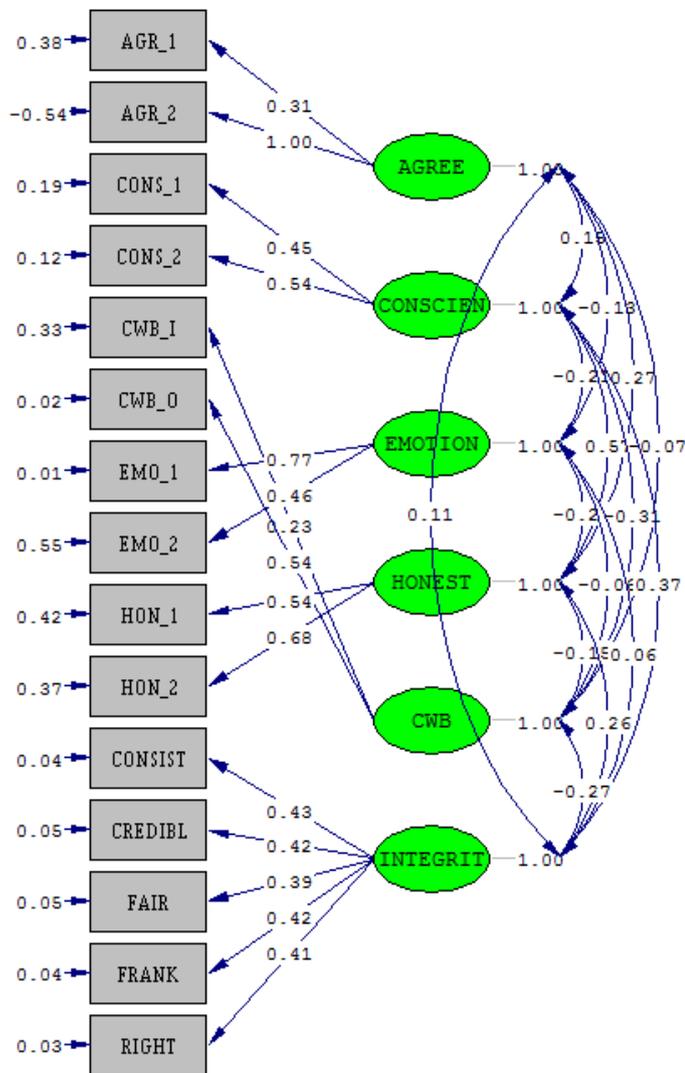
The standardised RMR of the overall measurement model was 0.053, is marginally above the 0.05 cut-off level indicative of good model fit. The GFI value of 0.92 for the measurement model illustrates good absolute fit.

According to Kline (2011) the comparative fit is basically an incremental fit index focused on measuring the significant fit enhancement of researched model above the baseline model, normally the independence model. The incremental fit indices resulted in a NFI value of .94, NNFI .96, CFI .97, which are all above .90, representing an acceptable comparative fit relative to the independence model.

Generally, assessing the goodness-of-fit indices led to the deduction that the overall measurement model showed reasonable good fit with the data. The fit statistics are displayed in Table 4.19.

The overall measurement model's path diagram is depicted in Figure 4.1. The path diagram of the overall measurement model is a graphic display presenting each item

(represented by item parcels) consisting of various scales deployed in this research, seems to be loading satisfactorily on the relevant latent variables.



Chi-Square=136.79, df=75, P-value=0.00002, RMSEA=0.060

Figure 4.1: Path diagram for the overall measurement model

4.8 Evaluating the Structural Model fit

Jöreskog and Sörbom (1996) maintain that the entire structural model is a combined makeup of the structural equation arrangement between the latent variables eta's (η 's)

and ksi's (ξ 's) and measurement models for the observed y-indicators and x-indicators where all variables, observed and latent, are thought to be measured in deviation from their means. The overall fit statistics for the structural model (see model 1) is shown in Table 4.19.

According to Diamantopoulos and Siguaw (2000) the RMSEA value of the structural model which is 0.059 is in the range of reasonable model fit. In this case a close model fit was obtained based on the P-value for Test of Close fit ($p = 0.182$).

The null hypothesis of exact fit should be rejected as the Satorra-Bentler Scaled Chi-Square is 138.411 ($p < 0.01$). The χ^2/df ratio was calculated using the Satorra-Bentler Scaled Chi-Square divided by the degrees of freedom (78). The χ^2/df ratio of 1.775 was marginally below the range of 2 – 5 showing good fit.

A good model fit was found as the RMR of the structural model was .024. The standardised RMR value of this structural model was .053, marginally missing the recommended value for good model fit (<0.05). The GFI value of .92 for the structural model fell within an acceptable range for good fit.

Overall results of the incremental fit indices resulted in a NFI value of .94, NNFI 0.97, and CFI 0.97, all these values were above .90, showing reasonable model fit.

Generally, the investigation of the goodness-of-fit indices led to the assumption that the overall structural model exhibits reasonable fit with the data.

4.9 Relationships between the variables

Upon verifying the how the structural model fits the data, it was found that the fit was reasonably well, it is therefore essential to examine the latent variable relationships as to ascertain whether the relationships stipulated in the conceptualisation phase, are actually confirmed by the data (Diamantopoulos & Siguaw, 2000). Three pertinent issues have to be considered for the evaluation of the relationship between exogenous

and endogenous latent variables. The first issue is to examine the signs of the parameters representing the paths between the latent variables to determine whether the direction of the hypothesised relationships is as theoretically determined. Secondly, it is crucial to inspect the degree of the projected parameters as it offers vital facts relating to the significance of the relationships. Lastly, the squared multiple correlations (R^2) ought to be taken into account as it describes the degree of variance in the endogenous variables which is explicated by the latent variables that are related to it (Diamantopoulos & Siguaw, 2000).

The freed up parts of the gamma (γ) and beta (β) matrices explicate the evaluated parameters. The unstandardised gamma matrix was used to assess the significance of the projected path coefficients γ_{ij} which shows the importance of the effect of ξ_j on η_i . These unstandardised γ_{ij} estimates are significant if $t > |1.645|$ (Diamantopoulos & Siguaw, 2000). Thus a significant γ estimation requires that the related H_0 -hypothesis will be rejected in support of the appropriate H_a -hypothesis.

Table 4.20 presents the unstandardised gamma matrix for the structural model. The four personality dimensions of the HEXACO are the exogenous latent variables. The hypotheses appropriate to the gamma matrix are the hypothesis 3 (H_{03}), hypothesis 4 (H_{04}), hypothesis 5 (H_{05}), hypothesis 6 (H_{06}), and hypothesis 7 (H_{07}).

Table 4.20

Unstandardised GAMMA (Γ) Matrix for the structural model

GAMMA				
	Conscientious	Agreeable	Emotionality	Honesty
Integrity	0.343 (0.105)	0.049 (0.043)	0.162 (0.081)	0.095 (0.127)
	3.253	1.146	1.997	0.749
CWB	-0.270			

GAMMA

	Conscientious	Agreeable	Emotionality	Honesty
	(0.153)			
	-1.767			

Table 4.21 displays the unstandardised beta (β) matrix that explains the connection between the endogenous variables and shows the slope of the regression in η_i and η_j . The unstandardised beta matrix is used to evaluate the hypothesised relationships between the endogenous variables in the structural model as specified by hypothesis 8 (H_{08}). Based on Diamantopoulos and Siguaw (2000), unstandardised β_{ij} estimates are also significant ($p < 0.05$) if t values are $> |1.645|$. A significant β estimates would result in the rejection of the relevant H_0 -hypothesis in support of the H_a -hypothesis.

Table 4.21

Unstandardised BETA (B) Matrix for the structural model

BETA	
	Integrity
CWB	-0.193 (0.117) -1.651

4.9.1 Relationship between conscientiousness and CWB

From Table 4.20 a conclusion is made on grounds that the t value of -1.767 (> 1.645) a significant negative relationship exists between conscientiousness (ξ_1) and CWB (η_2). Therefore, hypothesis 3 (H_{03}) could be rejected in support of H_{a3} : $\gamma_{21} > 0$,

indicating that the suggested relationship between the two latent variable was supported.

4.9.2 Relationship between conscientiousness and integrity

Table 4.20 provides a depiction as per the t value of 3.253 (> 1.645) showing a statistically significant positive relationship existed between conscientiousness (ξ_1) and integrity (η_1). Therefore, hypothesis 4 (H_{04}) could be rejected in favour of H_{a4} : $\gamma_{11} > 0$, which proposes that the suggested relationship between these two latent variable was supported.

4.9.3 Relationship between agreeableness and integrity

Based on the t value of 1.146, which is below 1.645 as can be seen in the gamma matrix, there is no significant relationship between agreeableness (ξ_3) and integrity (η_1). Therefore, hypothesis 5 (H_{05}) could not be rejected, which advises that the hypothesised relationship between agreeableness and integrity was not supported.

4.9.4 Relationship between emotionality and integrity

As indicated in Table 4.20, a significant relationship with a t-value of 1.997 exists between emotionality (ξ_2) and integrity (η_1). Therefore, no support was found for the negative effect of emotionality on integrity as stated by hypothesis 6.

4.9.5 Relationship between Honesty-Humility and integrity

From Table 4.20 it can be derived based on the t value of 0.749 (< 1.645) that a non-significant relationship existed between Honesty-humility (ξ_4) and Integrity (η_1) which advocates that the suggested relationship (hypothesis 7) between these two latent variable was not supported.

4.9.6 Relationship between integrity and CWB

Table 4.21 shows that the t value of -1.651 (> 1.645) indicated a significant negative relationship between integrity (η_1) and CWB (η_2) which proposes that the hypothesised relationship (hypothesis 8) between these two latent variable was supported.

4.10 Structural model modification indices

To establish the degree to which the structural model effectively describes the observed covariances between the variables it is worthwhile to also examine the structural model's modification indices. A modification index (MI) explains the lowest decrease in the model's chi-square value, once a preceding fixed parameter is freed up and the model is re-assessed (Jöreskog & Sörbom, 1993). Thus, the modification index for a specific fixed parameter points out that if that specific parameter is freed in a following model, as such the chi-square goodness-of-fit value would likely decline by the value of the index. Large modification indices are regarded as values above 6.6349 that would suggest parameters, if freed up, could possibly enhance the model fit ($p < 0.01$). However, due consideration should allowed if any adjustments are made to the model, as proposed by parameters with high MI values, can only be freed if it is theoretical sensible to do so (Kelloway, 1998).

No modification indices for the gamma or beta matrices were required as is shown by the LISREL output. Therefore implying that no additional paths exist between the latent variables that could significantly enhance the structural model fit.

4.11 Summary

The overall aim of this chapter was to give account of the results obtained from this study. The chapter began with an analysis of the measuring instruments that were used. Thereafter data analyses were done, and modifying where it was deemed necessary. Numerous fit indices were determined to assess model fit. Once the fit indices of the overall measurement and structural models were performed, a brief

discussion of the implications ensued. The overall results suggest a reasonable fit of both the measurement and the structural models. Furthermore, the statistical results of the hypothesised relationships were similarly discussed. The chapter to follow deliberates conclusions derived from the overall results in greater detail.

CHAPTER 5

DISCUSSION OF RESULTS, CONCLUSION AND RECOMMENDATIONS FOR FUTURE RESEARCH

5.1 INTRODUCTION

The main objective of this study was to look at the relationship between integrity, some personality traits and counterproductive work behaviour within the work setting. This final chapter will give an overview and summary of the outcomes of this study. Some recommendations for future research are also made. Finally, the possible implications the study can have on the human resource profession are discussed.

5.2 SUMMARY OF THE PRINCIPAL FINDINGS AND DISCUSSIONS

Once the main constructs of integrity, personality traits and counterproductive work behaviour were defined and the research questionnaire developed, that included the specific personality traits, counterproductive work behaviour and integrity scales, the overall measurement model was fitted to the data. In this process item parcels were used as there were restrictions on the available sample size. Item analysis and confirmatory factor analysis were performed on each sub-scale representing the latent dimensions used in the study. The main purpose of using these analyses was to assess if the items within each subscale successfully measure the intended latent integrity, personality trait and counterproductive work behaviour dimensions that it was supposed to measure. The results of the item and confirmatory factor analyses were presented in chapter 4. The below deductions and conclusions are made based on the item analyses, and the item analyses on the fitting of the measurement and structural models.

5.3 CONCLUSIONS REGARD RELIABILITY ANALYSIS

The process of item analysis was used on each of the scales used in the study. Item analysis helps determine whether or not an item is contributing to the internal consistency of the scale. The internal consistency of a scale in turn influences the

reliability coefficient of the overall scale. Nunnally (1978) and Nunnally and Bernstein (1994) argued for the use of scales with modest reliability coefficients in order to make sound decisions. The authors proposed some guidelines on how to interpret the reliability coefficients. Reliability coefficients (Cronbach's alpha) values above .70 and item-total correlational values above .20 were considered acceptable in this study (Nunnally, 1978). According to these guidelines, the reliability coefficients of the revised scales were mostly above .70 with the exception of the agreeableness ($\alpha = .69$) and emotionality ($\alpha = .65$) scales, which were marginally below the .70 threshold. All revised scales demonstrated high item-total correlations ($> .20$), except the conscientiousness scale (one item was flagged as a poor item).

EVALUATION OF THE OVERALL MEASUREMENT MODEL FIT (CFA)

The fit of the overall measurement model was determined using random parcelling and subscales as parcels. The overall fit of the measurement model was reasonable with an RMSEA value of 0.06 and a P-value for Close fit of 0.14 (see Table 4.19). The Satorra-Bentler Scaled Chi-Square of 136.787 ($p < 0.01$) indicates that the null hypothesis of exact fit could be rejected. The χ^2/df ratio was calculated using the Satorra-Bentler Scaled Chi-Square divided by the degrees of freedom (75). The χ^2/df ratio of 1.82 falls marginally below the range of 2 to 5 indicating good fit. The standardised RMR of the overall measurement model was found to be 0.053, which is marginally above the 0.05 cut-off level indicative of good model fit. The GFI value of 0.92 for the measurement model illustrates good absolute fit.

The incremental fit indices resulted in a NFI value of .94, NNFI .96, CFI .97, which are all above .90, indicating reasonable fit relative to the independence model.

Generally, the examination of the goodness-of-fit indices resulted in the conclusion that the overall measurement model displayed reasonable good fit with the data. The fit statistics can be seen in Table 4.19.

5.5 EVALUATION OF THE STRUCTURAL MODEL FIT

The process of refining the scales through weeding out poor items during reliability analysis culminated in the testing of the overall measurement model to further ascertain the measurement properties of the scales before determining the nature of the relationships. The structural model provides some insight into the nature of the hypothesised relationships through the beta and gamma matrices provided as part of the output. The research objective was to explain the influence of some HEXACO personality dimensions on integrity and CWB. The goodness-of-fit indices for the structural model are presented in Table 4.19. These fit indices generally indicate that the structural model fitted the data reasonably well. The RMSEA value of the structural model resulted in 0.059, indicating reasonable fit according to Diamantopoulos and Siguaw (2000). The P-value for Test of Close fit ($p = 0.18$) indicate that the model shows close fit.

The SRMR of the structural model was found to be 0.053 which marginally misses the good fit threshold of .05. According to Kelloway (1998), low values are an indication of good fit. The incremental fit indices resulted in a GFI of .92, NFI, NNFI, and CFI of above 0.90 which indicated acceptable comparative fit relative to the independence model.

In order to ensure that the structural model depicts all the variables that explain variance in the dependent variable the modification indices were inspected. The examination of the modification indices indicated no additional paths between any latent variables that would significantly improve the fit of the proposed structural model.

5.6 INTERPRETING THE PROPOSED HYPOTHESES

Further analysis was done on the gamma and beta matrices to establish the significance of the theoretical linkages projected in the structural model, as exemplified in Figure 3.1. The analysis of the results availed information with which to ascertain

whether the theoretical relationships indicated during the initial stage were actually supported by the data. Ensuing, the explanation of the proposed causal linkages between the various endogenous and exogenous variables is discussed. The following section provides a discussion regarding the interpretation of these results.

5.6.1 Gamma matrix

The relationship between exogenous and endogenous variables was analysed using the unstandardised gamma matrix and to assess the significance of the path coefficients. The unstandardised gamma matrix can be seen in

5.6.1.1 Relationship between conscientiousness and CWB

A negative relationship was hypothesised between conscientiousness and CWB and this relationship was confirmed through this study. It can be derived based on the t value of $-1.767 (> 1.645)$ that a significant negative relationship existed between conscientiousness (ξ_1) and CWB (η_2). Therefore, the alternative hypothesis, which suggests that the proposed relationship between these two latent variable exists was supported.

The above finding is strongly supported by existing research study literature. Numerous research studies have established that a statistically significant negative relationship exists between conscientiousness and CWB (Berry et al. 2007; Bowling, 2010; Dalal, 2005; Farhadi et al., 2012, Hunter, 2014, Lee et al., 2005). Furthermore, a research study by Mount, Illies and Johnson (2006) states that from a deductive reasoning perspective one should assume negative correlations between conscientiousness and CWB, because the higher an individual scores on conscientiousness the less likely the person would engage in CWB. While individuals with low scores on conscientiousness are more prone to committing acts of CWB. Research has overtime found conscientiousness to be the best predictor of CWB (Fayard et al., 2012; Penney et al., 2011),

Any organisation would value and treasure a conscientious employee, as such individuals display behaviours that positively build an organisation. Conscientious employees are inclined to maintain positive and constructive interpersonal relationships, they are organised and hardworking, thus have a goal-oriented approach in achieving tasks. These are all attributes that positively impact organisational performance and effectiveness.

5.6.1.2 Relationship between conscientiousness and integrity

A positive relationship was hypothesised between conscientiousness and integrity. The t-value of 3.253 (>1.645) indicates that a significant positive relationship existed between conscientiousness (ξ_1) and integrity (η_1). Therefore, the null hypothesis, which suggests that there is no significant relationship between these two latent variables was rejected.

This finding resonates with Murphy and Lee's (1994) study results which highlight that the concept of conscientiousness strongly correlated with integrity tests more than other personality traits. Consequently, people that are low scorers on conscientiousness are most likely to have low scores on integrity tests. Furthermore, strong emphasis is placed on the fact that conscientiousness is likely to be the most useful personality trait in predicting scores obtained from integrity tests, however not the only personality trait that can be utilised to better comprehend and study the concept of integrity.

The link between conscientiousness and integrity was hypothesised and supported by other research studies conducted by Ones et al. (1993) in a meta-analytical study. The meta-analytical study confirmed that conscientiousness strongly and positively correlated with integrity.

Conscientiousness consists of five dimensions in the lower order structure, namely orderliness, productiveness, accountability, able to control urges, and conformity.

These dimensions are usually displayed through a person's behaviour (Fayard et al., 2012).

The positive relationship between conscientiousness and integrity is supported by research as Lee et al. (2008) found that conscientiousness was significantly and positively associated with employee integrity through the HEXACO-PI (self-report) and NEO-FFI, even though the correlations were low, conscientiousness plays a positive and significant role in predicting integrity. Hunter (2014) further reported a substantially positive link between conscientiousness and integrity. Lee et al. (2005) also found a positive correlation between conscientiousness in the HEXACO model and integrity, as well as between conscientiousness in the Big Five Personality Inventory (BFI) and integrity. Through the current study this relationship was supported and confirmed.

5.6.1.3 Relationship between agreeableness and integrity

The hypothesised relationship between agreeableness and integrity was not supported in this study. Based on the t value of 1.146 which is below 1.645 as can be seen in the gamma matrix, there is no significant relationship between agreeableness (ξ_1) and integrity (η_1). Therefore, the null hypothesis, which suggests that there is no significant relationship between agreeableness and integrity was not rejected.

Although existing research literature has shown a significantly positive relationship between agreeableness and integrity, this relationship was not confirmed in this study. Ones et al. (1993) found a positive correlation between integrity and agreeableness ($r = .34, p < .05$). Further research by Byle and Holtgraves (2008) has also asserted a positive correlation between these two variables as agreeableness was the second strongest personality trait that significantly correlates with integrity test scores. However, this was not supported in the current study.

The study by Lee et al. (2008) shows weak correlations between the agreeableness scales of the HEXACO-PI (self-report and observer report) and the Employee Integrity Index, which measured the outcome variable of Employee Integrity. The correlation

between agreeableness and Employee Integrity in the HEXACO-PI self-report and the observer report was low. Thus the relationship between agreeableness and employee integrity for both self-report and observer reports of the HEXACO-PI was not significant, which support the finding of this study as agreeableness and integrity have no significant relationship. However, agreeableness significantly ($p < 0.01$) predicted employee integrity in the NEO-FFI (Lee et al., 2008). Furthermore, Lee et al. (2005) also found a positive correlation between Agreeableness in the HEXACO model and Integrity, as well as between Agreeableness in the Big Five Personality Inventory (BFI) and Integrity. These findings were however not confirmed in this study.

5.6.1.4 The relationship between emotionality and integrity

A negative relationship between emotionality and integrity was hypothesised in the research study. The SEM analysis shows a positive relationship between the two variables. A significant relationship with a t-value of 1.997 existed between emotionality (ξ_2) and integrity (η_1). Thus, the null hypothesis can be rejected because a significantly positive relationship was found to exist between emotionality on integrity.

According to research, Emotionality can be an early predictor through assessment whether an employee is likely to show lack of integrity as it determines if a person is a low or high scorer on the integrity dimension (Ashton & Lee, 2001; Furnham & Taylor, 2011). The emotionality factor in the HEXACO is different from that in the Big Five as it does not focus on anger-related content, but it is rather characterised by facets such as anxiety, sentimentality, and vulnerability versus independence, toughness, and fearlessness. Consequently the HEXACO Emotionality factor is less related to the B5/FFM Neuroticism (i.e., low Emotional Stability) but more related to the B5/FFM Agreeableness factor (Ashton & Lee, 2006). This could be a possible reason why a positive relationship was established in the studies that investigated the relationship between HEXACO emotionality and integrity.

Lee et al. (2005) found a positive correlation between emotionality in the HEXACO model and Integrity. However, Lee et al. (2008), reported weak correlations between the emotionality scales of the HEXACO-PI (self-report and observer report), and the Employee Integrity Index, which measured the outcome variable of Employee Integrity. The correlation between Emotionality and Employee Integrity in the HEXACO-PI self-report and observer report were significantly positive. The finding by Lee et al. (2005) was confirmed through this study and a positive relationship does exist between emotionality and integrity although a negative relationship was hypothesised.

5.6.1.5. Relationship between Honesty-Humility and integrity

A positive relationship between honesty-humility and integrity was postulated. It was however, not supported in this study. As per the SEM analysis t value of 0.749 (<1.645) a non-significant relationship existed between the two variables, therefore the null hypothesis could not be rejected as the proposed relationship between these two latent variable was not supported.

Lee and Ashton (2001) maintained that the unique variance of integrity tests can be linked to the construct of honesty, as the covariance in integrity test based on conscientiousness, agreeableness and emotional stability may be accommodated by the honesty factor and the integrity test variance in other personality traits may be due to the honesty factor. Although the authors emphasised a positive relationship between Honesty-humility and integrity, this study could not confirm that such a relationship exists.

Lee and Ashton (2004) did emphasise that the six factor explanation of the HEXACO may not present the final expression on the theme of a personality structure. However, future psycholexical studies piloted in various languages, might suggest a restructuring or revisions to the proposed model. Furthermore, it is vital to mention that two of the six factors that includes *Honesty–Humility* have been shown to be weaker compared to the other four in terms of the reliability with which they have been

recovered across languages. This finding could possibly have an impact on the current study as well.

A positive relationship between Honesty-Humility and integrity was not confirmed in this study. Based on Lee et al. (2008), moderate correlations were established between the H-H scale of the HEXACO-PI (self-report and observer report), and the Employee Integrity Index. Multiple regression evaluations were done to investigate the function of the scales of the HEXACO-PI in predicting Employee Integrity and a moderately significant relationship was found between Honesty-Humility and employee integrity for the self-report and observer report formats of the HEXACO-PI (Lee et al., 2008). This could be an indication of the weak correlations found in this study between Honesty-Humility and integrity.

5.6.2 Beta matrix

The relationship between endogenous variables in the structural model was analysed using the unstandardised beta (β) matrix, as depicted in Table 4.21. The beta matrix reflects the slope of the regression of η_i and η_j .

5.6.2.1 Relationship between integrity and CWB

The hypothesised relationship between integrity and CWB was supported in this study. The SEM analysis depicts a significantly negative relationship between the two variables. The t value of -1.651 (>1.645) thus suggesting that the null hypothesis can be rejected as the proposed relationship between these two latent variable was supported.

This finding was confirmed by the research by Hunter (2014) who showed that there is a significant negative relationship between integrity and CWB. This finding was also confirmed by other studies (Ones et al., 1993, Van Iddekinge *et al.*, 2012) showing through meta-analytic studies the two variables have a negative correlation.

5.7 LIMITATIONS OF THE STUDY AND RECOMMENDATIONS FOR FUTURE STUDY

A few limitations in this study has been identified. Firstly, it would have been beneficial if the sample size was bigger, as various organisations were approached to take part, however the response was not very satisfactory, and a bigger and more diversified sample could have resulted in a very rich study. The selection of the five organisations was done on a non-probability and convenience basis. It cannot be claimed that the selected sample is representative of the target population because of the non-probability sampling procedure that was used to choose the sample. It is recommended that the model be examined in a cross-validation study on a different and possibly a much larger sample of respondents from the same population used by companies in different regions in Namibia.

The second limitation is with regard to the topic itself of integrity and counterproductive work behaviour. These could have influenced the respondents' perception on the confidentiality of the study. This presumably had an impact in possible respondents not wanting to take part in the study, because of not wanting to give their personal view of integrity and counterproductive work behaviour as some can viewed these constructs as sensitive. The research was identified as a medium risk study, meaning that the answering of certain questions or statements could have made some respondents feel a sense of discomfort and thus the medium risk was depicted. It has been clearly highlighted in the consent section of the survey that all the responses of each candidate will be dealt with highest confidential or anonymous manner. This uncertainty can cause respondents to be concerned about the potential negative consequences of answering certain questions or the survey on their behaviours regarding integrity and counterproductive work behaviour. The researcher tried to ensure that respondents felt comfortable and confident on disclosing confidential information about themselves.

Another limitation is the use of self-reports to gather research data, as one greatly relies on the availability and willingness of possible respondents to complete the

research survey. Babbie and Mouton (2001) highlighted that the use of self-report assessments or inventories are a very common method of gathering data in the world of social sciences. Self-reports can be advantageous in that it depicts a respondent's personal perspective, but the down side is issues regarding possible validity problems that are likely to arise as people are bound to deceive others or themselves. However, response sets were built into the different scales, in the form of social desirability, denoting tendencies to respond to items independently of their content. These were taken into account when the questionnaire was designed and to ease the interpretation of the self-report measures. Another downside of self-reports is that the data is personal and idiosyncratic and could likely bear little relationship to reality, as seen by the respondent, others or the researcher. Moreover, people are not always honest and truthful when answering questionnaires (Patton, 2002). Thus, the possibility does exist that common method bias could be a limitation in this research study, as self-reporting was the only method used to collect the information through the use of self-report questionnaires. The fact that the same person/respondent provides the measure of the predictor and criterion variable has an impact on the method effect results. Thus, the type of self-report bias may be said to result from any artefactual covariance between the predictor and criterion variable created by the fact that the respondent providing the measure of these variables is the same person (Podsakoff, MacKenzie & Podsakoff, 2003).

Recommendations for future research studies, could take into account that more organisations be included for studying the same topic and most probably doing cross cultural research.

5.8 IMPLICATIONS FOR THE HUMAN RESOURCE PROFESSION

As discussed in the former part of this research, integrity at all levels in organisations is becoming a more fundamental and imperative construct to measure before recruiting, selecting and promoting employees. Failure to do so can become very costly for organisations as employees can engage in counterproductive behaviours that can ultimately lead to the development of a destructive organisation culture and

this in turn affecting the overall functioning of a company. The assessment of integrity becomes paramount in predicting counterproductive behaviour in potential employees before even entering the organisation, as well as predicting future work performance of prospective employees.

Many organisations these days are using integrity assessments as a guideline to assess the level of integrity of employees, such as reduction or loss of inventories and customer satisfaction reports. The benefit of using such tools is visible in many organisations to protect and safeguard themselves by making sure that the right caliber of honest and productive employees are hired to have a positive impact on the bottom line of the company. This precaution is instrumental for organisation who have high risk operations like financial institutions, security firms and mines to mention a few.

Some integrity tests have been designed to measure or predict specific CWB's, however research has established that most integrity measures tend to predict most CWB's equally well (Berry, Ones & Sackett, 2007). This is due to the fact that most CWB's are interrelated. Thus implying if a person is likely to engage in one form of CWB they are certain and likely to engage in other forms of CWB as well (Berry et al, 2007). Studies have shown that integrity tests are the personnel selection method with the highest incremental validity in predicting job performance above cognitive ability (Berry et al., 2007).

The benefit for the Human Resources profession in making use of sound, reliable and valid measure has numerous benefits. As previously mentioned integrity assessment tools has been proofed to be great indicators of job performance regardless of the type of roles or organisational settings. Employees showing a high sense of integrity is a sign of an honest person, someone who will comply and obey company rules, policies and procedures, follow safety processes, and avoid taking risks that might be costly to the organisation. Individuals with a grounded level of personal integrity typically set high ethical standards for themselves regardless of the environmental or

organisational setting they find themselves in. Failure to recognise the importance of assessing integrity can and has had detrimental effects on the functioning of many organisations and has led to bankruptcy and closure of renowned corporations.

Integrity assessment combined with pre-employment assessment like cognitive ability, general ability and personality can guide organisations in making informed selection decisions before selected candidates for a role. This additional information received through integrity tests can greatly aid organisations in detecting possible candidates who are most likely to be good performers. These assessment results provide valuable information for organisations to make an informed decision and cutting out possible financial costs, reducing the turnover and maintaining a positive and healthy work environment and morale within the workplace by selecting the right person. Any organisation today will not hire a job applicant if pre-employment assessment find areas of concern or the person lacking the required skills, aptitude, and personality for a specific job or role, because the person might be a bad fit for the role but also not fitting the company culture. The risk of hiring the wrong person and the process too cumbersome of getting rid of such a person once they have entered the organisation, therefore it is so vital for organisations to ensure the right selection decision is made.

This study focus on the importance of integrity in the workplace, and how the lack of it can be destructive to overall functioning of an organisation. Integrity is required at every level of the organisation but it must be driven, modelled and enforced by senior leadership. Despite the limitations of this study, people's level of integrity is a valid and reliable source that can be used to make selections. Hopefully through the results obtained from this study and other studies in the sphere of individuals currently practicing managers/leaders can improve their efficiency and value by being cognisant of the employees' perceptions and feelings of their ethical integrity. In view of this, integrity in the workplace, whether on leadership or follower level, is a vital necessity in any job or business and not merely a good, ethical or moral requirement.

5.9 CONCLUSION

As organisations are evolving and advancing thus the use of integrity test will mostly likely continue because the need to recruit the right person that blends in with the organisational culture is paramount. It is therefore important that practitioners always be mindful of why integrity assessments are used. Integrity assessments should always be integrated into a comprehensive battery of test instruments used for selection. These assessments can only be beneficial for an organisation, as it is better to spend more time and energy in ensuring the right selection decision is made rather than making the wrong decision and having to deal with the consequences after selection and onboarding has been done. As bad selection decisions have a negative and unfavorable impact on the bottom-line of the organisation. The benefits and value of using integrity tests to form an integral part of the selection process of an organisation or institution whether public or private, especially with the current local and global business climate where fraud, corruption and unethical behaviour is so pervasive and prevalent, outweighs the option of not testing a person level of integrity.

In conclusion, the whole process of doing this research was a challenging yet interesting exercise and experience. Gaining a deeper understanding of the importance of integrity in the workplace and how the different dimensions of personality can impact counterproductive behaviors' in employees, which ultimately influences a person's level of integrity. The goodness of fit and the results of the study are promising for future ventures to further expand the model or to test the model on a bigger and diverse sample. It would be beneficial to validate the model on a larger Namibian sample.

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APPENDIX A: INFORMED CONSENT FORM



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STELLENBOSCH UNIVERSITY CONSENT TO PARTICIPATE IN RESEARCH

Research title: The relationship between integrity, personality and counterproductive work behaviour.

You are asked to participate in a research study conducted by Mrs Oaitse S. van Staden, from the Industrial Psychology Department at Stellenbosch University, she will be supervised by Prof Amos Engelbrecht. The results obtained will contribute to the completion of a Masters of Commerce degree in Industrial Psychology. The results of this study will contribute to the completion of the thesis component of this postgraduate programme. You were selected as a possible participant in this study because you are in a non-managerial role (requirement for this study) in an organisation who can give a valuable input to the data gathering process of this study.

1. PURPOSE OF THE STUDY

Counterproductive work behaviour (CWB) has become an important construct in organisations, in relation to better understand this construct it is also vital to link it to integrity. Thus organisation can only benefit from better understanding CWB and integrity in relation to four personality traits namely conscientiousness, agreeableness and honesty-humility. The personality and level of integrity of an individual will determine whether the person will engage in CWB, which can negatively impact organisational functioning at individual, group and organisational level. Consequently, better understanding the relationship between CWB, integrity and personality becomes vital to consider in this case. This envisioned study will therefore make use of sound theoretical research and logical reasoning to analyse the relationship between CWB, integrity and personality of employees.

2. PROCEDURES

If you volunteer to participate in this study, you will also be asked to evaluate your integrity, personality and counterproductive work behaviour. You will perform this by completing one questionnaire with the different measures on for each construct. There are no right or wrong responses; we are merely interested in your personal opinions. The completion of the questionnaires will take place at a time and location that is convenient to you and the researcher and would require approximately 20-30 minutes of your time.

3. POTENTIAL RISKS AND DISCOMFORTS

It might be that some participants might experience discomfort when answering questions/statements on CWB.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

Participation in the study will provide the participant with an opportunity to reflect on their moral and ethical behavior, better understand their personality and how certain personality trait make one prone to engage in CWB. If the study yields positive relationship, the integrity scale used can be validated and later certified as an integrity test in organisations in South Africa, as well as Namibia if it's validated on a Namibian sample. This test will ensure that the right incumbents are selected and recruited and that prospective applicants who could engage in CWB can be identified before entering the organisation.

Feedback on the results of the survey will be provided to the organisations that participate in this study. The results can be an indication of whether the need exists to develop interventions and training programmes in terms of these constructs.

5. PAYMENT FOR PARTICIPATION

No payment will be made to participants for taking part in this study.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law.

Confidentiality will be maintained by means of a coding procedure. The results of this study will be published in the form of a completed dissertation, but confidentiality will be maintained at all times. Participant's names will not be published.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Oaitse van Staden (oaitse.vanstaden@gmail.com/0812237030) or Prof A.S. Engelbrecht (ase@sun.ac.za /+27 21 808 3003).

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE
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The information above was described to me, the participant, by Oaitse van Staden in English and I am in command of this language or it was satisfactorily translated to me. I was given the opportunity to ask questions and these questions were answered to my satisfaction.

I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study. I have been given a copy of this form.

Name of Subject/Participant

Name of Legal Representative (if applicable)

Signature of Subject/Participant or Legal Representative

Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ [*name of the subject/participant*] and/or [his/her] representative _____ [*name of the representative*]. [He/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in English and no translator was used.

Signature of Investigator

Date