

**PERSONALITY TRAITS AND INTEGRITY OF
APPLICANTS FOR SECURITY POSITIONS**

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FOR THE READER'S ATTENTION

The reader is reminded of the following:

- The references as well as the editorial style as prescribed by the *Publication Manual (4th edition)* of the American Psychological Association (APA) were followed in this mini-dissertation. This practice is in line with the policy of the Programme in Industrial Psychology of the PU for CHE to use APA style in all scientific documents as from January 1999.
- The mini-dissertation is submitted in the form of research articles. The editorial style specified by the *South African Journal of Industrial Psychology* (which agrees largely with the APA style) is used, but the APA guidelines were followed in constructing tables.

PREFACE

Lord I look up to you, up to heaven where you rule. As a servant depends on his master, so will I keep looking to you. Your greatness is beyond understanding and is therefore to be highly praised. To my Creator and God all the thanks, praise and glory.

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ABSTRACT

Counterproductive behaviour could have an enormous impact on the workplace. Little research has been done in South Africa into the construct of integrity. Employee performance and productivity are vital for companies and employers should be made aware of the risks of unethical behaviour within such companies. Attempts should be made to reduce these risks. Research has been focused on two sets of factors that prompt counterproductive behaviour, namely personality dimensions and situational factors. Limited sources that describe the association between integrity and personality are available on the African continent. Research has indicated that individuals who score lower on integrity indicate a greater likelihood of committing theft and vandalism than individuals with higher scores. The objective of this research was to determine the relationship between integrity and personality traits.

The study population consisted of 145 individuals who formed part of the same recruitment process for appointment as security guards. The Contextual Performance Scale, a newly developed South African measure of integrity in the work setting, and the Work Style Questionnaire were administered. Canonical correlation and moderated regression analyses were carried out to assess the relationship of personality variables to integrity.

The results indicate that a person with high integrity is someone who is relatively persuasive and very self-assured; he will be very much focused on detail – systematic, precise, accurate and able to pick up omissions quickly, he will respect authority, be hardworking, conscientious and trustworthy. This person was further shown to be able to plan and prepare ahead, and to take into consideration the consequences of decisions. A person with integrity can readily adapt to new situations and accept change without adapting his moral values. This employee can be relied upon and is unlikely to engage in counterproductive behaviour.

Recommendations were made for future research.

OPSOMMING

Teenproduktiewe gedrag kan 'n enorme impak op die werkplek hê. Min navorsing is nog in Suid-Afrika gedoen oor die konstruk van integriteit. Werknemers se prestasies en produktiwiteit is van kardinale belang vir ondernemings en werkgewers moet bewus gemaak word van die risiko's verbonde aan onetiese gedrag binne sulke ondernemings. Pogings moet aangewend word om die risiko's verbonde aan onetiese gedrag te verminder. Tot dusver was navorsing gefokus op twee stelle faktore wat teenproduktiewe gedrag bevorder. Die eerste is persoonlikheidsdimensies en die tweede is situasioneel van aard. Navorsing het getoon dat individue wat laer tellings op integriteitsvraelyste behaal, 'n hoër waarskynlikheid vir die beoefening van diefstal en vandalisme toon as individue wat hoog op integriteitsvraelyste meet. Die doel van hierdie navorsing was om die verhouding tussen integriteit en persoonlikheid te bepaal.

Die studiepopulasie het bestaan uit 145 individue wat almal deel uitgemaak het van dieselfde werwingsproses vir sekuriteitswagte. Die Contextual Performance Scale, 'n nuutontwikkelde, Suid-Afrikaans gebaseerde integriteitsvraelys is gebruik tesame met die Work Style Questionnaire, wat 'n beroeps persoonlikheidsvraelys is. Kanoniese korrelasies en 'n regressie-analise is gebruik om die verhouding tussen integriteit en die persoonlikheidskenmerke te bepaal.

Die resultate toon dat 'n persoon wat hoog toets op integriteit, iemand is wat redelik oortuigend, baie selfversekerd en detailgeoriënteerd is. So 'n persoon is sistematies, presies, akkuraat en sal maklik afwykings kan raaksien. Die individu sal gesag respekteer, is hardwerkend, konsensieus en betroubaar. Die persoon beplan vooruit en neem die gevolge van die besluite wat geneem word in ag. Die persoon kan maklik aanpas by nuwe situasies en aanvaar veranderinge sonder om morele waardes aan te pas. So 'n individu is betroubaar en dit is onwaarskynlik dat hy homself aan teenproduktiewe gedrag sal skuldig maak.

Aanbevelings is gemaak vir toekomstige navorsing.

CHAPTER 1

INTRODUCTION

This mini-dissertation deals with the construct of integrity and focuses on the relationship of specific personality factors to integrity. It was conducted with employees that applied for positions at a security company.

1.1 PROBLEM STATEMENT

Counterproductive behaviour could have an enormous impact on the workplace. In October 1997 a Ministerial Committee consisting of the Ministers of Justice, Public Service and Administration, Safety and Security, Provincial Affairs and Constitutional Development was mandated by Cabinet to consider proposals on the implementation of a national and provincial Campaign against Corruption. Among other matters the Ministerial Committee requested the Chairperson of the Public Service Commission to call a meeting of all stakeholders who, through their work, came into contact with any facets of corruption and the control and prosecution of corrupt practices. The first step of this process involved holding the Public Sector Anti-Corruption Conference in Cape Town on 10 and 11 November 1998. Representatives from all other sectors of society were similarly involved in planning the National Anti-Corruption Summit for 14 and 15 April 1999 in Parliament, Cape Town. These groups all share an interest in developing a national integrity strategy to fight corruption (Sangweni, Balia & Public Service Commission, 1999).

Employers are making a major investment in new employees well before they can return the employers' investment (Wang & Kleiner, 2000). Employee performance and productivity are vital and employers must be aware of the risks of unethical behaviour within their companies and try to reduce this. Unreliable employees might engage in a variety of undesirable behaviours, ranging from theft and sabotage to absenteeism and insubordination. In so doing, they also generate substantial direct and indirect costs for their employers. Although a variety of techniques might be used to control counterproductive behaviour in the workplace (Murphy,

1993), the screening of those persons whose proclivities will tend to undermine the success of the organisation should be the starting point to fighting corruption (Hogan & Hogan, 1989). Today's high-intensity business environments should also have strong ethics programmes in place (Nelson & Quick, 2000).

Research has been focused on two sets of factors that prompt counterproductive behaviour. The first being personal factors, which include personality dimensions such as integrity. The second is situational factors, which include the risks involved in certain situations (Mikulay, Neuman & Finkelstein, 2001). Brewer and Wilson (1995) support the second theory, which suggests honesty or dishonesty to be largely determined by situational factors, and include the examples of poor security, easy access to goods and the observation of other people's dishonesty. They suggest that virtually anyone will steal if put in a conducive situation. The underlying assumption concerning personality traits (and that of personality questionnaires), on the other hand, is that personality characteristics of individuals are stable and that certain personality traits are more likely to lead to unethical behaviour than a combination of other traits. Wanek (1999) combined the two factors and suggests that the impact of both situational and individual differences should be considered in an effort to control counterproductive behaviour in the workplace. The debate over personal versus situational causes of dishonesty is particularly germane, especially in the context of security, because of the strong situational pressures encountered by security personnel. They encounter a range of temptations and situational pressures to engage in dishonest behaviour (such as bribery and syndicate networks) that are not encountered by other civilians.

Security is one area in which no company can afford to compromise. In a world of increasing safety and security needs, a stable infrastructure and a wealth of experience are important criteria in choosing an integrated security solutions provider. The multinational security company where this study was conducted specialises in proactive integrity assessments, profiling individuals for specific positions, companies and countries. It also does potential assessments, documentation verification and truth verification (polygraph). These services include corporate intelligence, which covers everything from due diligence studies and background checks to intellectual property issues such as trademark infringements and counterfeit products, executive protection, technical surveillance counter-measures and truth verification. Typical operations include

insurance fraud investigations, undercover operations to combat stock theft and organised crime syndicates, forensic accounting and IT analysis to combat white-collar and computer-related crime. Their officers don't merely check that everything is in order, they search for ways in which things could go wrong.

This security company opts to offer the highest quality service, the most experienced personnel, cutting-edge technology, and unwavering dedication. Their national staff base consists of more than 10 000 highly trained professionals who protect assets of more than a thousand blue-chip clients nationally. The company also offers consulting services. These services include risk analysis and security surveys, integrity assessments and forensic investigations and audits. Better management, better recruitment and selection and better training and development of human capital are prerequisites for being able to provide an integrated risk management solution. Security officers are the front line against fraud and theft. The very nature of their responsibilities makes them extremely vulnerable to approaches from cash-flush syndicates. At the end of the day, it is only their morals and integrity that stand in the way of corruption. Proper screening can mitigate the risk of hiring people who steal, violate company policies or present other liability risks. Integrity assessment services include work reference analysis, performance history, structured personal interviews, nominated lifestyle interviews, lifestyle references, psychometric testing, criminal record checks, credit bureau checks, school reference checks and tertiary qualification checks.

Both theorists and researchers have long recognised that personality can influence the choices people make about which situations to enter and which to avoid (Winfred et al., 2001). Personality measures specifically designed for use in personnel selection can loosely be referred to as "measures of personality at work". The purpose of these inventories is the accurate prediction of individual differences in work behaviours of interest (Ones & Viswesvaran, 2001). People will always be faced with difficult situations and temptations; thus, it is necessary to examine the situational factors in the judging of an individual's openness to counterproductivity. This study will focus, however, on the more or less stable characteristics of personality traits with specific focus on integrity (Brewer & Wilson, 1995).

Integrity is sometimes understood as resisting temptation, but it often requires action and proactive behaviour – it involves more than “not giving in”. Integrity is essentially moral courage; the will and willingness to do what one knows one ought to do (Solomon, 1992). Hitt (1990) defined integrity as a driving force in the movement towards consistency between values and actions. It acts to preserve the whole by accepting polarities, appreciating differences and finding connections that transcend and encompass all points of view. Petrick and Quinn (1997) described integrity as the individual process of repeated alignment of moral awareness, judgement, character and conduct that demonstrates balanced judgement and promotes sustained moral development. Three dimensions of integrity form part of this definition. Individuals with integrity demonstrate balanced moral judgement in resolving issues, routinely align their psychological process of awareness, judgement, character and conduct in behaving responsibly, and sustain their development of moral reasoning from narrow self-interest, to universal, principled regard for others. In 2001 Petrick and Quinn defined integrity as the quality of moral self-governance at the individual and collective levels.

Woolley and Hakistan (1993) identified a number of separate elements underpinning integrity. These include conventional commitment (loyalty), active conscientiousness (finishing tasks) and social conformity (following instructions). Simons (2002) found behavioural integrity to be the perceived pattern of alignment between the actor’s words and deeds. This definition does not focus on morality or principles, but rather on the extent to which stated principles are seen as aligning with actions. Richard Hunter (1999), developer of the Contextual Performance Scale, defined integrity in the manual as behaviour that conforms to expected ethical and work norms in an organisation. The Oxford dictionary (1995) defines integrity as the quality of being honest and having strong moral principles, or the condition of being whole and not divided. Integrity has also been labelled as honesty, conscientiousness, dependability, stability, reliability and trustworthiness. Wanek (1999) found the construct of integrity to be ill defined. In order to advance validation of the construct, he suggested research to focus on what integrity is related to and, conversely, on what it is not related to. This research follows the recommendation of Wanek by investigating the relationship between integrity and certain personality dispositions.

Paper and pencil tests of honesty have largely been developed and marketed by security firms as alternatives to polygraph screening (Sackett & Harris, 1984). Many of these early integrity tests were sold directly to human resources personnel, not to psychologists, as surrogates for polygraph tests. Thus, the research associated with integrity tests lacked the sophistication associated with research done into other psychological assessment instruments. Today, integrity test publishers try to distance themselves as far as possible from polygraphs in the pre-employment setting as the prediction of a wide variety of counterproductive behaviours increased due to greater involvement of psychologists (Wanek, 1999).

The Association of Personnel Test Publishers (APTP, 1991) define integrity tests as psychological inventories designed to predict the likelihood that an applicant will exhibit counterproductive or delinquent behaviours, such as rule-breaking, work-related accidents, and theft. Ones and Viswesvaran (2001) considered integrity tests as prototypical criterion-focused occupational personality scales, specifically designed to assess dependability, integrity and honesty of applicants whereby theft and future on-the-job dishonest behaviours could be predicted. Individuals have a more accurate perception of their temperament and interests than of their abilities and aptitudes. People who score high on integrity tests are trustworthy, dependable, honest, responsible, conscientious employees. They are pro-social individuals who avoid counterproductive and antisocial behaviour. People who score low on integrity tests engage in a range of counterproductive behaviours (Hunter, 2002). It is more likely that individuals who receive low scores on these tests will engage in a range of dishonest, illegal or unacceptable behaviours, such as latecoming, absenteeism, lying, cheating, interpersonal aggression and stealing (Brewer & Wilson, 1995). From an attribution perspective it is much less threatening for people to decide that they do not have the temperament or interest required to fill a certain position as opposed to not having the ability for the job (Paulhus & John, 1998; Winfred et al., 2001).

Sackett, Burris and Cullahan (1989) and Sackett and Wanek (1996) classified integrity tests into two groups. The first group, overt or “clear purpose” tests, directly assess attitudes toward theft and dishonest and illegal acts. The development of overt integrity tests was guided by the insights of criminal law enforcement officers and was originally validated against the polygraph

(Woolley & Hakstian, 1992). Overt integrity tests consist of two sections: one deals with attitudes towards dishonesty and the other section deals with admissions of illegal activities. The job applicant clearly understands that the intent of the test is to assess integrity (Sackett & Wanek, 1996; Muchinsky, Kriek & Schreuder, 2002; Ones & Viswesvaran, 2001). The second group, personality-based or covert tests are designed by personality psychologists to predict a broad range of counterproductive behaviours (Woolley & Hakstian, 1992). They are considerably broader in focus and are not explicitly focused on theft. Some items included in these measures focus on dependability, conscientiousness, social conformity, thrill seeking, trouble with authority and hostility (Sackett & Wanek, 1996). Ones et al. (1993) have shown that the underlying constructs for the two types of integrity tests are similar. Sackett et al. (1989), however, stipulated that when one's interest is in predicting a narrow theft criterion, the narrower overt integrity tests are more appropriate to use. When one is interested in predicting broad criteria such as general counterproductive behaviour, the use of personality or overt measures will be more appropriate.

Studies done by Mumford et al. (2001), Hogan and Brinkmeyer (1997) and Ones et al. (1993) found the psychological gap between overt and covert personality-based integrity measures not to be as broad as expected. They found that although the item content on the two kinds of measures is distinct, the latent structures reflect similar underlying differential characteristics related to destructive, counterproductive behaviour. Job-relatedness is a factor in the selection of the type of integrity test to be used. Face-validity refers to the extent to which test content is perceived by the applicants as relevant to the content of the job for which they are applying. The perceived predictive validity reflects whether the applicants feel the test is likely to predict which candidates will be successful in the job, or not (Whitney, Diaz, Mineghino & Powers, 1999). These authors found overt integrity tests to be viewed by applicants as more job-related than personality-based integrity tests. Wanek (1999) showed that job complexity had no influence on integrity scores and that it could be used at all levels of the organisation.

The research done by Mikulay et al. (2001) showed that individuals who scored lower on integrity indicated a greater likelihood of committing theft and vandalism than individuals with higher scores. They found that in a high-risk setting, where the risk is high to be caught when

behaving in a counterproductive way, the likelihood of counterproductivity did not differ between individuals high or low in integrity. However, in a low-risk setting, where the risk of being caught when behaving counterproductively is relatively low, an individual low in integrity was significantly more likely to steal than individuals high in integrity. Another study done by Ones and Viswesvaran (2001) showed some striking consistencies across criterion-focused occupational personality scales including integrity tests, violence scales, drug and alcohol scales, stress tolerance scales and customer service scales. It is evident that previous research has produced a great diversity of results.

Both types of integrity tests have been found to be uncorrelated with cognitive ability (Ones, Schmidt & Viswesvaran, 1993) and not to produce adverse impact in selection applicants (Ones & Viswesvaran, 1998). Ones and Viswesvaran (2001) showed integrity test scores to be predictive of job training performance, production records, accidents at work and property damage. Ones et al. (1995) also showed integrity tests to predict supervisory ratings of overall job performance. It appears that it would be a mistake to continue focusing on counterproductive behaviour as sole criterion to judge the usefulness of integrity tests.

Wanek (1999) noted three things about integrity tests. First, they are paper-and-pencil self-report tests, which exclude other methods of assessing honesty. Second, they were developed for use with applicants or current employees who are, in psychological terms, part of a normal population, and thirdly, integrity scales were developed to predict employee potential and other on-the-job counterproductive behaviour. Although the research of Dalton and Metzger (1993) concluded integrity tests in general to be at best 13.6% accurate, Bernadin and Cooke (1993) and Ones et al. (1993) proved integrity tests to effectively predict the broad criterion of disruptive behaviours. Researchers focused on the construct validity of integrity tests and assessed the relations between integrity tests and personality instruments with correlation or linear regression techniques (Mumford et al., 2001; Murphy & Lee, 1994; Ones & Viswesvaran, 2001; Woolley & Hakstian, 1992). This line of inquiry has produced contradictory findings with regard to which personality variables are significantly correlated with integrity (Craig & Smith, 2000). In the studies conducted by Ones and Viswesvaran (2001) three of the Big Five personality traits were found to be related to integrity. These traits are, in varying degrees, Conscientiousness, Agreeableness and Emotional Stability.

In the research of Barrick and Mount (1991), they agreed that Emotional Stability is anxiousness, being depressed, angry, embarrassed, emotional, insecure and worried. Agreeableness has also been labelled as social conformity and includes traits such as being courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted and tolerant. Conscientiousness refers to conformity and socially prescribed impulse control (Hogan and Ones, 1997). According to Barrick and Mount (1991) it includes volitional traits (hardworking, achievement-orientated, responsible, careful, planning and persevering). This factor is expected to relate to job performance because these characteristics attribute to accomplishing tasks in all jobs. Barrick and Mount (1991) further state that traits associated with extraversion included sociability, assertiveness, talkativeness and being active. Traits mostly related to the factor of Openness to Experience include being imaginative, cultured, serious, original, broad-minded, intelligent and artistically sensitive.

Ones et al. (1993) have provided evidence indicating that personality measures capturing aspects of conscientiousness provide potentially viable measures of integrity. Sackett and Wanek (1996) went one step further to determine whether conscientiousness explains the predictive validity of integrity tests. Murphy and Lee (1994) tested the role of conscientiousness in integrity as a result of the conclusion by Barrick and Mount (1991) that this factor is a broad dimension of personality and known to be relevant to a wide range of work-related variables. They found that individuals with low scores on conscientiousness also tested low on integrity questionnaires. Thus, they suggested conscientiousness as an explanatory construct for integrity. They concluded that although these two constructs are strongly related, they are not identical. Conscientiousness includes dependability, perseverance and achievement orientation, whereas integrity is more focused on honesty and avoidance of counterproductivity. Ones et al. (1993) stated that in the integrity-testing literature, conscientiousness has been viewed from its negative pole (e.g. irresponsibility, carelessness and violation of rules).

Ones et al. (1993) found in their meta-analysis that Extraversion and Openness to Experience were least important for the prediction of integrity. Ones and Viswesvaran (2001), Sackett and Wanek (1996) and Ones et al. (1995) found conscientiousness to have the most overlap with integrity tests, although they also considered scores on Agreeableness and Emotional Stability

scales. They found that, for both overt and covert integrity tests, the highest correlations were with Conscientiousness, Agreeableness and Emotional Stability, and that the relations with Extraversion and Openness to Experience were negligible. Sackett and Wanek (1996) found that, although conscientiousness overlaps a lot with the construct of Integrity, Conscientiousness, Agreeableness and Emotional Stability each makes an independent contribution to integrity test scores. Craig and Smith (2000) conducted a person-orientated study that used the Five Factor Model of personality to identify multiple personality configurations in terms of integrity. In the one cluster analysis they found high integrity patterns to be characterised by low Extraversion and Openness, but high Agreeableness, Conscientiousness and Emotional Stability. The other cluster analysis found the same set of characteristics present in persons with high integrity, except with regard to Agreeableness, which showed a low score. They suggested low Extraversion to be an important determinant of a high integrity profile. Rieke and Guastello (1991) raised another significant point. According to them, integrity measures are primarily correlated to measures of conscientiousness, low anxiety and agreeableness. Their concern is that people in the creating and helping professions, such as artists and psychologists, often score low on conscientiousness.

Lilienfeld, Alliger and Mitchell (1995) addressed a few unresolved issues in their article. One of these issues was fake-ability or the extent to which integrity tests are susceptible to impression management. Impression management has been defined by Winfred et al. (2001) as a test taker's active attempts to create an image as a hard-working, conscientious, punctual person – knowing full well that he is none of these. Impression management is in the service of pleasing a prospective employer, and the self-description can be changed depending on the perceived desires of another employer. Craig and Smith (2000) imply a process of identifying individuals with certain characteristics and then examining outcomes for those individuals. This approach seemed to identify disparate, but internally homogeneous subgroups for which different rules apply by clustering different patterns of scores on the Big Five in order to determine a high integrity profile. They suggest it may be possible for two individuals to exhibit the same stand on integrity, but display different profiles on the Big Five Dimensions.

A validity study of an honesty test done by Bernadin and Cooke (1993) suggested that one would expect social desirability pressure to suppress responses of individuals to knowingly present themselves as sympathetic to theft. However, studies conducted on individual faking of integrity tests showed that individuals instructed to represent themselves in a favourable light, can do so (Ones & Viswesvaran, 1998b; Hough & Schneider, 1996; Sackett & Wanek, 1996). Ones and Viswesvaran (1998b) noted further that a finding that individuals can fake does not necessarily imply that they do so in real-world applications. Ones, Viswesvaran and Schmidt (1993) and Ones and Viswesvaran (1998) found that the extent to which response distortion exists does not destroy the criterion-related validities of integrity tests. Still, clear steps should be taken to standardise the test administration process and to engender a common frame of reference for all job applicants (Ones & Viswesvaran, 1998).

In a meta-analysis by Stanush (1996) instructions to fake resulted in elevated scores on both social desirability ($d=0.28$) scores and scores of the Big Five (Agreeableness ($d=0.29$), Conscientiousness ($d=0.53$), Extraversion ($d=0.29$), Emotional Stability ($d=0.36$), Openness ($d=0.28$)). Conscientiousness demonstrated the highest elevation in scores. Ones et al. (1996) demonstrated that although the tendency to respond favourably is correlated with stable personality variables, faking can also be induced by either the instruction to do so or the motivation of the applicant to present himself in a favourable light. Research done by Murphy (1993) showed job applicants most likely to engage in theft-related activity, perceive themselves as average people in a basically dishonest world.

Most of the studies referred to were conducted outside Africa. This study will be one of the first attempted integrity studies with an African sample. Counterproductive behaviour could have an enormous impact on the workplace. South Africa is in need of security personnel with high integrity in order to fight corruption. This study could contribute to the use of integrity measures in order to employ quality personnel for organisations. The findings could also be used further to prevent counterproductive behaviour such as absenteeism, fraud and theft.

From the literature review, the following research questions emerge:

- How is integrity conceptualised in the literature?
- How are personality traits conceptualised in the literature?
- How is the relationship between integrity and personality traits conceptualised in the literature and empirically?
- Can personality be used to predict integrity?

1.2 RESEARCH OBJECTIVES

The research aims are divided into a general aim and specific objectives.

2.1 General aim

The general aim of this research is to establish the relationship between integrity and personality in order to determine which personality traits are characteristic of a person with high integrity.

2.2 Specific objectives

The specific research objectives are as follows:

- To conceptualise integrity from the literature.
- To conceptualise personality dimensions from the literature.
- To conceptualise the relationship between integrity and personality dimensions from the literature and empirically.
- To use personality to predict integrity.

1.3 RESEARCH METHODOLOGY

To answer the problem statement and objectives as mentioned above, and to test the hypotheses, the following research methodology was followed:

1.3.1 Phase 1: Literature Review

During this phase, a thorough literature study was done on integrity and the personality dimensions that correlate with integrity. Not much research has been conducted in South Africa into the concept of human integrity from a personality perspective. Therefore international research findings were used for the most part.

1.3.2 Phase 2: Empirical Study

The empirical study consists of the research design, study population, measuring battery and the statistical analysis.

1.3.2.1 Research Design

A survey will be utilised to achieve the research objectives. An availability sample is used – all the applicants that applied for the position of security guard completed the measuring instruments. Information collected is utilised to report on the population at that time. The design can also be used to assess interrelationships among variables within the populations. According to Shaughnessy and Zechmeister (1997) this design is ideal to address the descriptive and predictive functions associated with correlation research.

1.3.2.2 Study Population

The information that will be used in the empirical study forms part of the results of an assessment centre conducted on a group of applicants ($n = 151$) that applied for positions at a security company in 2002. The individuals were all part of the same screening process to select employees as security guards, and completed a comprehensive personality inventory and a newly developed, South African based personality integrity test. All of them were African males with either a certificate (COSC) or a diploma. Of the 151 applicants, only 145 of the questionnaires could be used for data analysis.

1.3.2.3 Measuring Instruments

An important consideration in selection systems is the relationship between various predictors. If overall criterion-related validity of the selection system is to be maximised, it is highly desirable to combine predictors that correlate highly with the criterion of interest and little or not at all with each other (Ones & Viswesvaran, 2001). The following instruments will be used:

- **Work Styles Questionnaire (WSQ).** The WSQ was specifically designed by Hawkey and Borkowski (1999) to assess the behaviours associated with successful job performance. The questionnaire is based on a comprehensive competency model developed from detailed job analyses of roles in a variety of different sectors. It is concerned with assessing personality, or behavioural preference or style, in four main areas or domains. Firstly, “Relationship with People”, which looks at how an individual relates to others. This can be characterised by traits such as assertive, social confident, team orientated and showing empathy. Secondly, “Thinking Style”, which covers traits such as innovation, organising, being practical and methodical. Next, there are the “Feelings”, including traits such as resilience, emotional control and optimism, and, finally, the “Energies”, including competitiveness, restlessness, decisiveness and achievement orientation. It also measures the area of “Compliance”, which includes dependability and social desirability. In this respect, the WSQ conforms to the established SHL/OPQ Model of Personality. The dependable scale on the WSQ version was built in after research done by Barrick and Mount (1991) and Woolley and Hakistan (1993). It supports the conscientiousness dimension and also followed as a result of developments of the constructs underlying “integrity” testing (Hawkey & Borkowski, 1999).

A construct validity study was done on the WSQ by means of a factor analysis. It was based on the intercorrelations of the WSQ and a principal component analysis was used with varimax rotation. Five factors were extracted. Loadings below 0.4 have been omitted. The results showed a pattern similar to the Big Five factor model of personality.

Factor 1 related mostly to the scales of Detail Consciousness, Social Desirability, Dependability, Active, Innovative, Socially Confident and Optimistic on the WSQ. Factor 2

had the strongest loadings on Forward Thinking, Considerate, Team Orientated, Practical and Assertive. Factor 3 related to Competitive and Achieving while Factor 4 related to Adaptable. Factor 5 loaded on Emotionally Controlled, Decisive and Resilient. Hawkey and Borowski (1999) reviewed the psychometric ($n=455$) and validity data of the scale. The Cronbach Alpha Coefficient of internal consistency of the 16 styles varies between 0.65 and 0.93 with a median value of 0.80. They also revealed high construct validity in three different studies.

Table 1

Factor loadings of the WSQ after varimax rotation

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Detail Conscious (WNT5)	0.75				
Social Desirability (WND2)	0.75				
Dependable (WND1)	0.75				
Active (WNE1)	0.62				
Innovative (WNT2)	0.60				
Socially Confident (WNR2)	0.52			0.48	
Optimistic (WNF3)	0.49	0.48			
Forward Thinking (WNT4)		0.81			
Considerate (WNR4)		0.76			
Team Orientated (WNR3)		0.65			
Practical (WNT1)		0.59			
Assertive (WNR1)		0.41			
Competitive (WNE2)			0.77		
Achieving (WNE3)			0.76		
Adaptable (WNT3)				0.84	
Emotionally Controlled (WNF2)					0.76
Decisive (WNE4)					0.68
Resilient (WNF1)	0.49				0.49
% Variance explained	36.1	26.1	17.2	15.5	14.8

- **Contextual Performance Scale (CPS).** The CPS has been scientifically developed by Richard Hunter to assess ethical behaviour in the work environment. The test items are based on a scientifically established factor structure consisting mainly of conscientiousness, agreeableness, emotional stability, direct admissions of deviant activities, the individual's opinion regarding deviant behaviour and his reactions to hypothetical situations featuring

deviant behaviour. Two sections are provided. The first section delivers three scores, namely CPS score, Motivational Distortion and Random Response. The CPS score, derived from a propensity key, reflects integrity and gives the overall result on the questionnaire. This score is interpreted as a percentile. A score below 65% is listed as risky and the respondent is not recommended for appointment, whereas a score of 65% and above is categorised as average to high and the individual can be considered for appointment. A score of 65% or above should, however, be interpreted in correlation with the other two scores. The second score reflects the random response score and shows whether a test taker has read the questions carefully or simply responded randomly. A score above 40% indicates a probable random response and influences the validity of such a test. The motivational distortion scale indicates to what extent a test taker manipulated the answers in order to portray himself in a more favourable way. A score less than 50% is good. Between 50% and 80% the score is viewed as suspicious and above 80% the test score is not reliable and the applicant should not be considered for appointment. The second section evaluates the direct admissions to theft with only yes and no answers to choose from. Should admissions occur, these should be verified with a follow-up interview to get an idea of the seriousness of the admission.

Using a sample of more than 600 employees, a reliability coefficient of 0.90 and a validity of 0.32 were found (Hunter, 1999). Adjustments still have to be made for criteria unreliability and range restriction. The test was submitted for accreditation at the South African Psychological Board at the end of July 2002.

1.3.2.5 Statistical analysis

The statistical analysis will be carried out with the help of the SAS programme (SAS Institute, 2000). Descriptive statistics will be used to analyse the data. Canonical correlation will be used to determine the relationships between the dimensions of the WSQ and the CPS. The goal of canonical correlation is to analyse the relationship between two sets of variables (Tabachnick & Fidell, 2001). Canonical correlation is considered a descriptive technique rather than a hypothesis-testing procedure.

Moderated regression analyses will be carried out to assess the contribution of the independent variables to Integrity scores. According to Tabachnick and Fidell (2001), the correlation between an independent variable and a dependent variable reflects variance shared with the dependent variable, but some of the variance may be predictable from other independent variables. The unique contribution of an independent variable to predicting a dependent variable can be assessed by semi-partial correlation. Squared semi-partial correlation (sr_i^2) expresses the unique contribution of the independent variable to the total variance of the dependent variable. In standard multiple regression sr_i^2 for an independent variable is the amount by which R^2 is reduced if that independent variable is deleted from the regression equation. The difference between R^2 and the sum of all independent variables represents shared variance, variance that is contributed to R^2 by two or more independent variables. Effect sizes were calculated with the following formula (Steyn, 1999):

$$f^2 = \frac{sr_i^2}{1 - R^2}$$

Steyn (1999) suggested the following guidelines in terms of effect size, namely $f^2 = 0,01$ (small effect), $f^2 = 0,15$ (medium effect) and $f^2 = 0,35$ (large effect). In the present study a cut-off point of 0,15 (medium effect) was set for the practical significance of f^2 .

1.4 CHAPTER DIVISION

In this mini-dissertation the chapters are presented as follows:

Chapter 1: Introduction

Chapter 2: Research article

Chapter 3: Conclusions, limitations and recommendations

1.5 CHAPTER SUMMARY

In this chapter the problem statement and motivation are discussed. The purpose of the research is formulated, the methodology of the research is outlined and the methods used for the statistical analysis are described.

A research article on the relationship between personality and integrity of applicants in a security environment is presented in Chapter 2.

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CHAPTER 2

RESEARCH ARTICLE

PERSONALITY TRAITS AND INTEGRITY OF APPLICANTS FOR SECURITY POSITIONS

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ABSTRACT

Little research has been done in South Africa into the construct of integrity. Limited sources that describe the association between integrity and personality are available on the continent. The objective of this research was to determine the relationship between integrity and personality traits. The study population consisted of 145 individuals who formed part of the same recruitment process for appointment as security guards. The Contextual Performance Scale, a newly developed South African measure of integrity in the work setting, and the Work Style Questionnaire were administered. Results indicate that a person with high integrity is someone who is relatively persuasive and very self-assured; he will be very much focused on detail – systematic, precise, accurate and able to pick up omissions quickly, he will respect authority, be hardworking, conscientious and trustworthy.

OPSOMMING

Min navorsing is in Suid-Afrika beskikbaar oor die konstruksie van integriteit. 'n Beperkte aantal bronne wat die verband tussen integriteit en persoonlikheid beskryf, is beskikbaar op die kontinent. Die doelstelling van hierdie navorsing was om te bepaal of daar 'n verband bestaan tussen integriteit en persoonlikheidstreke. Die ondersoekgroep het bestaan uit 145

individue wat deel was van dieselfde keuringsproses om as sekuriteitswagte aangestel te word. Die Contextual Performance Scale, 'n nuut ontwikkelde Suid-Afrikaanse meetinstrument van integriteit in werkskonteks, en die Work Styles Questionnaire is administreer. Resultate het aangedui dat iemand met hoë integriteit ook iemand is wat redelik oortuigend kan wees. Die individu is selfversekerd, detailgeoriënteerd, sistematies, presies, akkuraat en sal maklik afwykings of oortredinge kan raaksien. 'n Individu met hoë integriteit respekteer outoriteit, is hardwerkend, konsensieus en betroubaar.

Counterproductive behaviour could have an enormous impact on the workplace. In October 1997 a Ministerial Committee consisting of the Ministers of Justice, Public Service and Administration, Safety and Security, Provincial Affairs and Constitutional Development was mandated by Cabinet to consider proposals on the implementation at national and provincial level of a Campaign against Corruption. Among other matters the Ministerial Committee requested the Chairperson of the Public Service Commission to call a meeting of all stakeholders who, through their work, come into contact with many facets of corruption and the control and prosecution of corrupt practices. The first step of this process involved holding the Public Sector Anti-Corruption Conference in Cape Town on 10 and 11 November 1998. Representatives from all other sectors of society were similarly involved in planning the National Anti-Corruption Summit for 14-15 April 1999 in Parliament, Cape Town. These groups all share an interest in developing a national integrity strategy to fight corruption (Sangweni, Balia & Public Service Commission, 1999).

Employers are making a major investment in new employees well before employees can return the employers' investment (Wang & Kleiner, 2000). Employee performance and productivity are vital and employers must be aware of the risks for unethical behaviour within their companies and try to reduce this. Unreliable employees might engage in a variety of undesirable behaviours, ranging from theft and sabotage to absenteeism and insubordination. In so doing, they also generate substantial direct and indirect costs for their employers. Although a variety of techniques might be used to control counterproductive behaviour in the workplace (Murphy, 1993), the screening of those persons whose proclivities will tend to undermine the success of the organisation should be the starting point to fighting corruption (Hogan & Hogan, 1989). Today's high-intensity business environments should also have strong ethics programmes in place (Nelson & Quick, 2000).

Research has been focused on two sets of factors that prompt counterproductive behaviour. The first being personal factors, which include personality dimensions such as integrity. The second set is situational factors, which include the risks involved in certain situations (Mikulay, Neuman & Finkelstein, 2001). Brewer and Wilson (1995) support the second theory, which suggests honesty or dishonesty to be largely determined by situational factors, and include the examples

of poor security, easy access to goods and the observation of other people's dishonesty. They suggest that virtually anyone will steal if put in a conducive situation. The underlying assumption of personality traits (and that of personality questionnaires), on the other hand, is that personality characteristics of individuals are stable and that certain personality traits are more likely to lead to unethical behaviour than a combination of other traits. Wanek (1999) combined the two factors and suggests that the impact of both situational and individual differences should be considered in an effort to control counterproductivity in the workplace. The debate over personal versus situational causes of dishonesty is particularly germane, especially in the context of security, because of the strong situational pressures encountered by security personnel. They encounter a range of temptations and situational pressures to engage in dishonest behaviours (such as bribery and syndicate networks) that are not encountered by civilians.

Security is one area in which no company can afford to compromise. In a world of increasing safety and security needs, a stable infrastructure and a wealth of experience are important criteria in choosing an integrated security solutions provider. The multinational security company where this study was conducted specialises in proactive integrity assessments, profiling individuals for specific positions, companies or countries. They also do potential assessments, documentation verification and truth verification (polygraph). These services include corporate intelligence, which covers everything from due diligence studies and background checks to intellectual property issues such as trademark infringements and counterfeit products, executive protection, technical surveillance counter-measures and truth verification. Typical operations include insurance fraud investigations, undercover operations to combat stock theft and organised crime syndicates, forensic accounting and information technology analysis to combat white-collar and computer-related crime. Their officers don't merely check that everything is in order; they search for ways in which things could go wrong.

This security company opts to offer the highest quality service, the most experienced personnel, cutting-edge technology, and unwavering dedication. Their national staff base consists of more than 10 000 highly trained professionals who protect assets of over a thousand blue-chip clients nationally. The company also offers consulting services. These services include risk analysis and security surveys, integrity assessments and forensic investigations and audits. Better

management, better recruitment and selection and better training and development of human capital are prerequisites for being able to provide an integrated risk management solution. Security officers are the front-line against fraud and theft. The very nature of their responsibilities makes them extremely vulnerable to approaches from cash-flush syndicates. At the end of the day, it's only their morals and integrity that stand in the way of corruption. Proper screening can mitigate the risk of hiring people who steal, violate company policies or present other liability risks. Integrity assessment services include work reference analysis, performance history, structured personal interviews, nominated lifestyle interviews, lifestyle references, psychometric testing, criminal record checks, credit bureau checks, school reference checks and tertiary qualification checks.

Both theorists and researchers have long recognised that personality can influence the choices people make about which situations to enter and which to avoid (Winfred et al., 2001). Personality measures specifically designed for use in personnel selection can loosely be referred to as “measures of personality at work”. The purpose of these inventories is the accurate prediction of individual differences in work behaviours of interest (Ones & Viswesvaran, 2001). People will always be faced with difficult situations and temptations; thus, it is necessary to examine the situational factors in the judging of an individual's openness to counterproductivity. This study will focus, however, on the more or less stable characteristics of personality with specific focus on integrity (Brewer & Wilson, 1995).

Integrity is sometimes understood as resisting temptation, but it often requires action and proactive behaviour – it involves more than “not giving in”. Integrity is essentially moral courage; the will and willingness to do what one knows one ought to do (Solomon, 1992). Hitt (1990) defined integrity as a driving force in the movement towards consistency between values and actions. It acts to preserve the whole by accepting polarities, appreciating differences and finding connections that transcend and encompass all points of view. Petrick and Quinn (1997) described integrity as the individual process of repeated alignment of moral awareness, judgement, character, and conduct that demonstrates balanced judgement and promotes sustained moral development. Three dimensions of integrity form part of this definition. Individuals with integrity demonstrate balanced moral judgement in resolving issues, routinely align their

psychological process of awareness, judgement, character, and conduct in behaving responsibly, and sustain their development of moral reasoning from narrow self-interest, to universal, principled regard for others. Petrick and Quinn (2001) defined it as the quality of moral self-governance at the individual and collective levels.

Woolley and Hakistan (1993) identified a number of separate elements underpinning integrity. These include conventional commitment (loyalty), active conscientiousness (finishing tasks) and social conformity (following instructions). Simons (2002) found behavioural integrity to be the perceived pattern of alignment between the actor's words and deeds. This definition does not focus on morality or principles, but rather on the extent to which stated principles are seen as aligning with actions. Hunter (1999), developer of the Contextual Performance Scale defined integrity as behaviour that conforms to expected ethical and work norms in an organisation. The Oxford dictionary (1995) defines integrity as the quality of being honest and having strong moral principles, or the condition of being whole and not divided. Integrity has also been labelled as honesty, conscientiousness, dependability, stability, reliability and trustworthiness. Wanek (1999) found the construct of integrity to be ill defined. In order to advance validation of the construct, he suggested research to focus on what integrity is related to and, conversely, on what it is not related to.

This research will investigate the relationship of integrity to certain personality dimensions. More specifically, it aims to conceptualise the term integrity and to conceptualise the relationship between integrity and personality dimensions from the literature. A further objective is to emphasize the worth and importance of integrity testing as part of pre-employment screening in order to identify high risk profiles before these people are recruited. In this way negative behavioural patterns potentially detrimental to a company can be determined. This could lead to the proactive recruitment of trustworthy, dependable, honest, responsible and conscientious employees.

Integrity and Personality

Paper and pencil tests of honesty have largely been developed and marketed by security firms as alternatives to polygraph screening (Sackett & Harris, 1984). Many of these early integrity tests were sold directly to human resources personnel, not to psychologists, as surrogates for polygraph tests. Thus, the research associated with integrity tests lacked the sophistication associated with research done into other psychological assessment instruments. Today, integrity test publishers try to distance themselves as far as possible from polygraphs in the pre-employment setting as the prediction of a wide variety of counterproductive behaviours increased due to greater involvement of psychologists (Wanek, 1999).

The Association of Personnel Test Publishers (APTP, 1991) define integrity tests as psychological inventories designed to predict the likelihood that an applicant will exhibit counterproductive or delinquent behaviours, such as rule-breaking, work-related accidents, and theft. Ones and Viswesvaran (2001) considered integrity tests as prototypical criterion-focused occupational personality scales, specifically designed to assess dependability, integrity and honesty of applicants, whereby theft and future on-the-job dishonest behaviours could be predicted. Individuals have a more accurate perception of their temperament and interests than of their abilities and aptitudes. People who score high on integrity tests are trustworthy, dependable, honest, responsible, conscientious employees. They are pro-social individuals who avoid counterproductive and antisocial behaviour. People who score low on integrity tests, engage in a range of counterproductive behaviour (Hunter, 2002). It is more likely that individuals who receive low scores on these tests will engage in a range of dishonest, illegal or unacceptable behaviours, such as latecoming, absenteeism, lying, cheating, interpersonal aggression and stealing (Brewer & Wilson, 1995). From an attribution perspective it is much less threatening for people to decide that they do not have the temperament or interest required to fill a certain position as opposed to not having the ability for the job (Paulhus & John, 1998; Winfred et al., 2001).

Sackett, Burriss and Cullahan (1989) and Sackett and Wanek (1996) classified integrity tests into two groups. The first group, overt or “clear purpose” tests, directly assess attitudes toward theft

and dishonest and illegal acts. The development of overt integrity tests was guided by the insights of criminal law enforcement officers and was originally validated against the polygraph (Woolley & Hakstian, 1992). Overt integrity tests consist of two sections: one deals with attitudes towards dishonesty and the other section deals with admissions of illegal activities. The job applicant clearly understands that the intent of the test is to assess integrity (Sackett & Wanek, 1996; Muchinsky, Kriek & Schreuder, 2002; Ones & Viswesvaran, 2001). The second group, personality-based or covert tests are designed by personality psychologists to predict a broad range of counterproductive behaviours (Woolley & Hakstian, 1992). They are considerably broader in focus and are not explicitly focused on theft. Some items included in these measures focus on dependability, conscientiousness, social conformity, thrill seeking, trouble with authority and hostility (Sackett & Wanek, 1996). Ones et al. (1993) have shown that the underlying constructs for the two types of integrity tests are similar. Sackett et al. (1989), however, stipulated that when one's interest is in predicting a narrow theft criterion, the narrower overt integrity tests are more appropriate to use. When one is interested in predicting broad criteria such as general counterproductive behaviour, the use of personality or overt measures will be more appropriate.

Job-relatedness is a factor in the selection of the type of integrity test to be used. Face-validity refers to the extent to which test content is perceived by the applicants as relevant to the content of the job for which they are applying. The perceived predictive validity reflects whether the applicants feel the test is likely to predict which candidates will be successful in the job, or not (Whitney, Diaz, Mineghino & Powers, 1999). Mumford et al. (2001); Hogan and Brinkmeyer (1997) and Ones et al. (1993) found overt integrity tests to be viewed by applicants as more job-related than a personality-based integrity test. Wanek (1999) showed that job complexity had no influence on integrity scores and that it could be used at all levels of the organisation.

The research done by Mikulay et al. (2001) showed that individuals who scored lower on integrity indicated a greater likelihood of committing theft and vandalism than individuals with higher scores. They found that in a high-risk setting, where the risk is high to be caught when behaving in a counterproductive way, the likelihood of counterproductivity did not differ between individuals high or low in integrity. However, in a low-risk setting, where the risk of

being caught when behaving counterproductively is relatively low, an individual low in integrity was significantly more likely to steal than individuals high in integrity. Another study done by Ones and Viswesvaran (2001) showed some striking consistencies across criterion-focused occupational personality scales including integrity tests, violence scales, drug and alcohol scales, stress tolerance scales and customer service scales. It is evident that previous research has produced a great diversity of results.

Both types of integrity tests have been found to be uncorrelated with cognitive ability (Ones, Schmidt & Viswesvaran, 1993) and not to produce adverse impact in selection of applicants (Ones & Viswesvaran, 1998). Ones and Viswesvaran (2001) showed integrity test scores to be predictive of job training performance, production records, accidents at work and property damage. Ones et al. (1995) also showed integrity tests to predict supervisory ratings of overall job performance. It appears that it would be a mistake to continue focusing on counterproductive behaviour as sole criterion to judge the usefulness of integrity tests.

Previous researchers focused on the construct validity of integrity tests and assessed the relationships between integrity tests and personality instruments with correlation or linear regression techniques (Mumford et al., 2001; Murphy & Lee, 1994; Ones & Viswesvaran, 2001; Woolley & Hakstian, 1992). This line of inquiry has produced contradictory findings with regard to which personality variables are significantly correlated with integrity (Craig & Smith, 2000). In the studies conducted by Ones and Viswesvaran (2001) three of the Big Five personality traits were found to be related to integrity. These traits are, in varying degrees, Conscientiousness, Agreeableness and Emotional Stability.

Conscientiousness refers to conformity and socially prescribed impulse control (Hogan & Ones, 1997). According to Barrick and Mount (1991) it includes volitional traits (hardworking, achievement-orientated, responsible, careful, planning and persevering). This factor is expected to relate to job performance because these characteristics attribute to accomplishing tasks in all jobs. Agreeableness has been labelled as social conformity and includes traits such as being courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted and tolerant. Barrick and Mount (1991) associate Emotional Stability with anxiousness, being depressed,

angry, embarrassed, emotional, insecure and worried. The other two Big Five traits are Extraversion and Openness to Experience. Traits associated with Extraversion include sociability, assertiveness, talkativeness and being active. Traits mostly related to the factor of Openness to Experience include being imaginative, cultured, serious, original, broad-minded, intelligent and artistically sensitive (Barrick & Mount, 1991).

Sackett and Wanek (1996) questioned the relationship between integrity and specifically the Conscientiousness dimension of the Big Five. Ones et al. (1993) have provided evidence indicating that personality measures capturing aspects of conscientiousness provide potentially viable measures of integrity. Sackett and Wanek (1996) went one step further to determine whether conscientiousness explains the predictive validity of integrity tests. Murphy and Lee (1994) tested the role of conscientiousness in integrity as a result of the conclusion by Barrick and Mount (1991) that this factor is a broad dimension of personality and known to be relevant to a wide range of work-related variables. They found that individuals with low scores on conscientiousness also tested low on integrity questionnaires. Thus, they suggested conscientiousness as an explanatory construct for integrity. They concluded that although these two constructs are strongly related, they are not identical. Conscientiousness includes dependability, perseverance and achievement orientation, whereas integrity is more focused on honesty and avoidance of counterproductivity. Ones et al. (1993) stated that in the integrity-testing literature, conscientiousness has been viewed from its negative pole (e.g. irresponsibility, carelessness and violation of rules).

Ones et al. (1993) found Extraversion and Openness to Experience least important for the prediction of integrity. Ones and Viswesvaran (2001), Sackett and Wanek (1996) and Ones et al. (1995) found Conscientiousness to have the most overlap with integrity tests, although they also considered scores on Agreeableness and Emotional Stability scales. They found that, for both overt and covert integrity tests, the highest correlations were with Conscientiousness, Agreeableness and Emotional Stability, and that the relations with Extraversion and Openness to Experience were negligible. Sackett and Wanek (1996) found that, although Conscientiousness overlaps a lot with the construct of integrity, Conscientiousness, Agreeableness and Emotional Stability each makes an independent contribution to integrity test scores. Craig and Smith (2000)

conducted a person-orientated study that used the Five Factor Model of personality to identify multiple personality configurations in terms of integrity configurations. In the one cluster analysis they found high integrity patterns to be characterised by low Extraversion and Openness, but high Agreeableness, Conscientiousness and Emotional Stability. The other cluster analysis found the same set of characteristics present in persons with high integrity, except with regard to Agreeableness, which showed a low score. They suggested low Extraversion to be an important determinant of a high integrity profile. Rieke and Guastello (1991) raised another significant point. According to them, integrity measures are primarily correlated to measures of conscientiousness, low anxiety and agreeableness. Their concern is that people in the creating and helping professions, such as artists and psychologists, often score low on Conscientiousness.

Lilienfeld, Alliger and Mitchell (1995) addressed a few unresolved issues in their article. One of these issues was fake-ability or the extent to which integrity tests are susceptible to impression management. Impression management has been defined by Winfred et al. (2001) as a test taker's active attempts to create an image as a hard-working, conscientious, punctual person – knowing full well that he is none of these. Impression management is in the service of pleasing a prospective employer, and the self-description can be changed depending on the perceived desires of another employer. Craig and Smith (2000) used a person-oriented approach to integrity research, which implies a process of identifying individuals with certain characteristics and then examining outcomes for those individuals. This approach seemed to identify disparate, but internally homogeneous subgroups for which different rules apply by clustering different patterns of scores on the Big Five in order to determine a high integrity profile. They suggest it may be possible for two individuals to exhibit the same stand on integrity, but display different profiles on the Big Five Dimensions.

A validity study of an honesty test done by Bernadin and Cooke (1993) suggested that one would expect social desirability pressure to suppress responses of individuals to knowingly present themselves as sympathetic to theft. However, studies conducted on individual faking of integrity tests showed that individuals instructed to represent themselves in a favourable light, can do so (Ones & Viswesvaran, 1998; Hough & Schneider, 1996; Sackett & Wanek, 1996). Ones and Viswesvaran (1998) noted further that a finding that individuals can fake does not necessarily

imply that they do so in real-world applications. Ones, Viswesvaran and Schmidt (1993) and Ones and Viswesvaran (1998) found that the extent to which response distortion exists does not destroy the criterion-related validities of integrity tests. Still, clear steps should be taken to standardise the test administration process and to engender a common frame of reference to all job applicants (Ones & Viswesvaran, 1998).

People who have access to confidential information should be required to submit to thorough background checks before being employed. By examining the test materials filled out during job application process and comparing them to the records of policeman who later committed crimes, O'Connor-Boes, Chandler and Timm (1997) found the environment where the subject was placed to be more predictive of counterproductive behaviour than the personality of that person. They found the supervisor's attitude and involvement in counterproductivity to be detrimental to the future deviant behaviour of employees. Integrity interviews could be used to obtain qualitative information about an individual's integrity. These interviews involve frank discussions of past misdeeds, theft and other deviant behaviour, and in many ways resemble overt or clear-purpose integrity tests (Brewer & Wilson, 1995).

Most of the studies referred to were conducted outside Africa. This research will bring the integrity domain closer to home. Counterproductive behaviour could have an enormous impact on the workplace. South Africa is in need for security personnel with high integrity in order to fight corruption. This research could contribute to the increased use of integrity measures, which could lead to higher productivity throughout organisations. Quality personnel should be employed to prevent counterproductive behaviour such as absenteeism, latecoming, poor office discipline, substance abuse, fraud and theft.

METHOD

Research Design

A survey will be utilised to achieve the research objectives. An availability sample is used – all the applicants that applied for the job of security personnel completed the test battery as part of the selection procedure. The individuals were all part of the same screening process to select employees as security guards, and completed a comprehensive personality inventory and a newly developed, South African based personality integrity test.

Study Population

The information that was used in the empirical study forms part of the results of an assessment centre conducted on a group of applicants ($N = 151$) for positions at a security company in 2002. All of them were African males with either a certificate (COSC) or a diploma. Of the 151 applicants, only 145 of the questionnaires could be used for data analysis.

Measuring Instruments

The Work Styles Questionnaire (WSQ) (Hawkey & Borkowski, 1999) and the Contextual Performance Scale (CPS) (Hunter, 1999) were used to achieve the research objectives set for this study.

- *Work Styles Questionnaire.* The WSQ has been specifically designed by Hawkey and Borkowski (1999) to assess the behaviours associated with successful job performance. The questionnaire is based on a comprehensive competency model developed from detailed job analyses of roles in a variety of different sectors. It is concerned with assessing personality, or behavioural preference or style, in four main areas or domains. Firstly, “Relationship with People”, which looks at how an individual relates to others. This can be characterised by traits such as assertive, social confident, team orientated and showing empathy. Secondly, “Thinking Style”, which covers traits such as innovation, organising, being practical and

methodical. Next, there are the “Feelings”, including traits such as resilience, emotional control and optimism, and, finally, the “Energies”, including competitiveness, restlessness, decisiveness and achievement orientation. It also measures the area of “Compliance”, which includes dependability and social desirability. In this respect, the WSQ conforms to the established SHL/OPQ Model of Personality. The Dependable scale on the WSQ version was built in after research done by Barrick and Mount (1991) and Woolley and Hakistan (1993). It supports the conscientiousness dimension and also followed as a result of developments of the constructs underlying “integrity” testing (Hawkey & Borkowski, 1999).

A construct validity study was done on the WSQ by means of a factor analysis. It was based on the intercorrelations of the WSQ and a principal component analysis was used with varimax rotation. Five factors were extracted. Loadings below 0.4 have been omitted. Factor 1 related mostly to the scales of Detail Consciousness, Social Desirability, Dependability, Active, Innovative, Socially Confident and Optimistic on the WSQ. Factor 2 had the strongest loadings on Forward Thinking, Considerate, Team Orientated, Practical and Assertive. Factor 3 related to Competitive and Achieving while Factor 4 related to Adaptable. Factor 5 loaded on Emotionally Controlled, Decisive and Resilient. Results of this factor analysis are reported in Table 1.

Table 1

Factor loadings of the WSQ after varimax rotation

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Detail Conscious (WNT5)	0.75				
Social Desirability (WND2)	0.75				
Dependable (WND1)	0.75				
Active (WNE1)	0.62				
Innovative (WNT2)	0.60				
Social Confident (WNR2)	0.52			0.48	
Optimistic (WNF3)	0.49	0.48			
Forward Thinking (WNT4)		0.81			
Considerate (WNR4)		0.76			
Team Orientated (WNR3)		0.65			
Practical (WNT1)		0.59			
Assertive (WNR1)		0.41			
Competitive (WNE2)			0.77		
Achieving (WNE3)			0.76		
Adaptable (WNT3)				0.84	
Emotionally Controlled (WNF2)					0.76
Decisive (WNE4)					0.68
Resilient (WNF1)	0.49				0.49
% Variance explained	36.1	26.1	17.2	15.5	14.8

Hawkey and Borkowski (1999) reviewed the psychometric ($N=455$) and validity data of the scale. The Cronbach Alpha Coefficient of internal consistency of the 16 styles varies between 0.65 and 0.93 with a median value of 0.80. Hawkey and Borowski (1999) also revealed high construct validity in three different studies. The scale includes the following dimensions:

- The *Assertive* scale is concerned with the extent to which individuals enjoy influencing, directing and convincing others.
- The *Socially Confident* scale is concerned with how talkative, lively and self-assured individuals in a company are.

- The *Team Orientated* scale is concerned with individuals' preference for working in a team or group compared to working alone.
- The *Considerate* scale is concerned with the extent to which individuals are concerned about welfare, problems or circumstances of others.
- The *Practical* scale is concerned with the degree to which individuals enjoy using their hands – mending, repairing or constructing things.
- The *Innovative* scale is concerned with how imaginative, novel or creative individuals think they are.
- The *Adaptable* scale is concerned with the degree to which individuals are open to new approaches and enjoy and welcome change.
- *Forward Thinking* is concerned with how structured individuals are and the extent to which they anticipate and plan ahead.
- The *Detail Conscious* scale is concerned with how tidy, precise and thorough individuals are in relation to their work and their surroundings.
- The *Resilient* scale is concerned with the extent to which individuals are calm, unworried and not easily hurt or upset by criticism.
- The *Emotionally Controlled* scale is concerned with the degree to which individuals are open or restrained in the expression of their emotions or feelings.
- The *Optimistic* scale is concerned with individuals' perspective on their situations and circumstances. (Particularly the balance between being more cheerful and positive vs. more resigned and negative.)

- The *Active* scale is concerned with individuals' energy and stamina and also their preference for high levels of activity and a higher pace of work.
- The *Competitive* scale is concerned with the extent to which individuals enjoy winning, beating others and getting the better of people in a range of activities.
- The *Achieving* scale is concerned with how high individuals set their personal goals and targets, how much they are stimulated by challenge and career progression and how keen they are to improve their own performance.
- The *Decisive* scale is concerned with the extent to which individuals make quick decisions or reach rapid conclusions about various situations or problems.
- The *Dependable* scale is concerned with how hard-working, conscientious and reliable individuals describe themselves as being, and also how respectful they are of authority.
- The *Social Desirability* scale looks at the extent to which individuals have been concerned about presenting a positive image of themselves to others.
- *Contextual Performance Scale (CPS)*. The CPS has been scientifically developed by Hunter (1999) to assess ethical behaviour in the work environment. The test items are based on a scientifically established factor structure consisting mainly of conscientiousness, agreeableness, emotional stability, direct admissions of deviant activities, the individual's opinion regarding deviant behaviour and his reactions to hypothetical situations featuring deviant behaviour. Two sections are provided. The first section delivers three scores, namely CPS score, Motivational Distortion and Random Response. The CPS score, derived from a propensity key, reflects integrity and gives the overall result on the questionnaire. This score is interpreted as a percentile. A score below 65% is listed as risky and the respondent is not recommended for appointment, whereas a score of 65% and above is categorised as average to high and the individual can be considered for appointment. A score of 65% or above should, however, be interpreted in correlation with the other two scores. The second score

reflects the random response score and shows whether a test taker has read the questions carefully or simply responded randomly. A score above 40% indicates a probable random response and influences the validity of such a test. The motivational distortion scale indicates to what extent a test taker manipulated the answers in order to portray himself in a more favourable way. A score less than 50% is good. Between 50% and 80% the score is viewed as suspicious and above 80% the test score is not reliable and the applicant should not be considered for appointment. The second section evaluates the direct admissions to theft with only yes and no answers to choose from. Should admissions occur, these should be verified with a follow-up interview to get an idea of the seriousness of the admission.

Using a sample of more than 600 employees, a reliability coefficient of 0.90 and a validity of 0.32 were found (Hunter, 1999). Adjustments still have to be made for criterion unreliability and range restriction. The test was submitted for accreditation at the South African Psychological Board at the end of July 2002.

Statistical analysis

The statistical analysis was carried out with the help of the SAS programme (SAS Institute, 2000). Descriptive statistics were used to analyse the data. Pearson product-moment correlation coefficients were used to specify the relationships between the variables. Canonical correlation was used to determine the relationships between the dimensions of the WSQ and the CPS. The goal of canonical correlation is to analyse the relationship between two sets of variables (Tabachnick & Fidell, 2001). Canonical correlation is considered a descriptive technique rather than a hypothesis-testing procedure.

Moderated regression analyses were carried out to assess the contribution of the independent variables to Integrity scores. According to Tabachnick and Fidell (2001), the correlation between an independent variable and a dependent variable reflects variance shared with the dependent variable, but some of the variance may be predictable from other independent variables. The unique contribution of an independent variable to predicting a dependent variable can be assessed by semi-partial correlation. Squared semi-partial correlation (sr_i^2) expresses the unique

contribution of the independent variable to the total variance of the dependent variable. In standard multiple regression sr_i^2 for an independent variable is the amount by which R^2 is reduced if that independent variable is deleted from the regression equation. The difference between R^2 and the sum of all independent variables represents shared variance, variance that is contributed to R^2 by two or more independent variables. Effect sizes were calculated with the following formula (Steyn, 1999):

$$f^2 = \frac{sr_i^2}{1 - R^2}$$

Steyn (1999) suggested the following guidelines in terms of effect size, namely $f^2 = 0,01$ (small effect), $f^2 = 0,15$ (medium effect) and $f^2 = 0,35$ (large effect). In the present study a cut-off point of 0,15 (medium effect) was set for the practical significance of f^2 .

RESULTS

Descriptive statistics of the WSQ and CPS for security applicants are shown in Table 2.

Table 2
Descriptive Statistics of the Measuring Instruments

Item	Mean	Median	SD	Skewness	Kurtosis
CPS					
Integrity (CPS1)	65.19	65.00	5.92	0.99	24.45
Motivation Distortion (CPS2)	39.54	38.00	16.56	0.33	-0.64
Random Response (CPS3)	10.77	10.00	9.91	0.83	-0.03
WSQ					
Assertive (WNR1)	27.86	28.00	3.96	-0.41	0.89
Social Confident (WNR2)	25.01	26.00	5.76	-0.64	-0.01
Team Orientated (WNR3)	26.71	27.00	4.37	-0.36	0.37
Considerate (WNR4)	27.46	28.00	3.80	-0.18	-0.06
Practical (WNT1)	27.55	28.00	3.73	-0.39	0.20
Innovative (WNT2)	25.04	26.00	4.11	-0.27	0.83
Adaptable (WNT3)	24.97	25.00	3.94	-0.38	1.68
Forward Thinking (WNT4)	27.90	28.00	4.50	-1.50	4.13
Detail Conscious (WNT5)	26.07	26.00	4.47	0.24	-0.06
Resilient (WNF1)	23.49	24.00	5.11	-0.54	1.44
Emotionally Controlled (WNF2)	19.17	18.00	6.23	0.25	-0.72
Optimistic (WNF3)	23.12	23.00	4.17	-0.06	0.02
Active (WNE1)	23.28	23.00	4.00	0.38	1.14
Competitive (WNE2)	28.79	29.00	4.39	-0.89	0.98
Achieving (WNE3)	28.32	28.00	3.62	-0.36	0.40
Decisive (WNE4)	16.58	16.00	5.77	0.16	-0.44
Dependable (WND1)	23.01	22.00	4.18	-0.23	1.62
Social Desirability (WND2)	26.71	27.00	4.15	-0.14	0.23

The CPS scores are normally distributed. The kurtosis on Overall Integrity (24.45) is very high. Regarding the skewness and kurtosis of the WSQ, Table 2 shows Forward Thinking (-1.50) to be relatively skew and Adaptable (1.68), Resilient (1.44) and Active (1.14) to have a high kurtosis. Although the reliability and construct validity of the two questionnaires could not be determined as part of this study, it proved to be adequate during the development of these instruments. The Contextual Performance Scale showed a reliability of 0.90 and a construct validity of 0.32 (Hunter, 1999). Using a sample of 600 employees, the Work Styles

Questionnaire showed Cronbach Alpha Coefficients of between 0.65 for Considerate and 0.93 for Socially Confident after its development (Hunter, 1999).

The product-moment correlation coefficients between the WSQ and CPS of security applicants are reported in Table 3.

Table 3

The product-moment correlation coefficients between the items of the WSQ and the CPS

Item	Overall Integrity (CPS1)	Motivation Distortion (CPS2)	Random Response (CPS3)
Assertive (WNR1)	0.20*	0.26*	-0.16
Social Confident (WNR2)	0.21*	0.22*	0.00
Team Orientated (WNR3)	0.20*	0.08	-0.11
Considerate (WNR4)	0.16	0.17*	0.09
Practical (WNT1)	0.08	0.12	0.02
Innovative (WNT2)	0.10	0.15	-0.13
Adaptable (WNT3)	-0.40*	0.08	-0.06
Forward Thinking (WNT4)	0.14	0.05	-0.07
Detail Conscious (WNT5)	0.29*	0.37**	0.04
Resilient (WNF1)	0.04	0.20*	0.01
Emotionally Controlled (WNF2)	-0.03	-0.11	0.42*
Optimistic (WNF3)	0.17*	0.29*	-0.06
Active (WNE1)	0.19*	0.40**	0.07
Competitive (WNE2)	0.07	0.10	-0.14
Achieving (WNE3)	-0.03	0.01	-0.13
Decisive (WNE4)	-0.12	0.16	0.12
Dependable (WND1)	0.24*	0.23*	0.00
Social Desirability (WND2)	0.21*	0.31**	0.13

*Statistical significant $p \leq 0.05$

+ Practically significant correlation (medium effect): $r \geq 0,30$

Table 3 shows a statistically significant negative correlation (practically significant, medium effect) between overall integrity and adaptability. Assertive, Social Confident, Team Orientated, Detail Conscious, Optimistic, Active, Dependable and Social Desirability had statistically significant correlations with Overall Integrity. Motivational Distortion showed statistically significant correlations (practically significant, medium effect) with Detail Consciousness, Activeness and Social Desirability. Assertive, Social Confident, Considerate,

Detail Conscious, Resilient, Optimistic, Active, Dependable and Social Desirability had statistically significant correlations with Motivational Distortion. Emotionally Controlled showed a statistically significant correlation (practically significant, medium effect) with the Random Response scale.

Canonical correlation using SAS CANCELL was performed between the CPS and the WSQ. Shown in Table 4 are correlations between the variables and canonical variates, standardised canonical variate coefficients, within-set variance accounted for by the canonical variates (percent of variance), redundancies and canonical correlations.

Table 4

Canonical Correlation analysis between the WSQ and CPS

	First Canonical Variate	
	Correlation	Coefficient
Integrity Set (CPS)		
Integrity (CPS1)	0.70	0.52
Motivation Distortion (CPS2)	0.87	0.74
Random Response (CPS3)	0.01	0.04
Percent of Variance	16.39	
Redundancy	0.05	
Personality Set (WSQ)		
Assertive (WNR1)	0.51	0.30
Social Confident (WNR2)	0.47	0.13
Team Orientated (WNR3)	0.28	0.06
Considerate (WNR4)	0.37	0.09
Practical (WNT1)	0.23	-0.37
Innovative (WNT2)	0.28	-0.21
Adaptable (WNT3)	0.07	-0.24
Forward Thinking (WNT4)	0.18	0.04
Detail Conscious (WNT5)	0.74	0.46
Resilient (WNF1)	0.29	-0.16
Emotionally Controlled (WNF2)	-0.16	0.14
Optimistic (WNF3)	0.53	0.28
Active (WNE1)	0.69	0.36
Competitive (WNE2)	0.18	-0.01
Achieving (WNE3)	-0.02	-0.16
Decisive (WNE4)	0.11	0.01
Dependable (WND1)	0.52	0.08
Social Desirability (WND2)	0.59	0.22
Percentage of Variance	41.47	
Redundancy	0.13	
Canonical Correlation	0.57	

The first canonical correlation was 0,57 (32% overlapping variance), the second was 0,43 (19% overlapping variance), the third was 0,37 (14% overlapping variance). *F*-tests were only statistically significant for the first canonical variate $F(54, 370,29)=1.94$ ($p<0,01$). Therefore the second and third canonical variates will not be interpreted.

With a cut-off correlation of 0,30 the variables in the Integrity set of scores that correlated with their first canonical variate were Overall Integrity and Motivational Distortion. Among the personality variables, Assertive, Socially Confident, Considerate, Detail Conscious,

Optimistic, Active, Dependable and Social Desirability correlated with their first canonical variate. The first canonical variate explains 32% of the overall variance in the two sets. It indicates that Overall Integrity (0.70) and Motivational Distortion (0.87) are associated with Assertive (0.51), Socially Confident (0.47), Considerate (0.37), Detail Conscious (0.74), Optimistic (0.53), Active (0.69), Dependable (0.52) and Social Desirability (0.59).

A moderated regression analysis was conducted to determine the proportion of variance in overall integrity (as measured by the CPS) that is predicted by personality (as measured by the WSQ). The results of the regression analysis with Overall Integrity (as measured by CPS1) as independent variable and personality traits (as measured by the WSQ) as dependent variables are shown in Table 5.

Table 5

Moderated Regression with Integrity as Dependent Variable (DV) and Personality Traits as Independent Variables (IV)

Variable	Parameter	SE	T	P	sr_i^2
DV = Integrity (CPS1); IV = Personality variables $F = 2,16$ $R^2 = 0,2362$ $\sum sr_i^2 = 0,18517$					
Intercept	57.89	6.13	9.44	<.0001	
Assertive (WNR1)	0.22	0.16	1.32	0.1905	0.01050
Social Confident (WNR2)	0.22	0.11	2.03	0.0441	0.02508
Team Orientated (WNR3)	0.20	0.13	1.57	0.1180	0.01502
Considerate (WNR4)	0.03	0.17	0.18	0.8557	0.00020
Practical (WNT1)	-0.29	0.18	-1.65	0.1022	0.01643
Innovative (WNT2)	-0.07	0.15	-0.47	0.6402	0.00133
Adaptable (WNT3)	-0.31	0.14	-2.23	0.0278	0.03003
Forward Thinking (WNT4)	0.34	0.14	0.24	0.8110	0.03003
Detail Conscious (WNT5)	0.29	0.14	1.99	0.0482	0.02412
Resilient (WNF1)	-0.21	0.12	-1.78	0.0778	0.01917
Emotionally Controlled (WNF2)	0.04	0.08	0.54	0.5927	0.00174
Optimistic (WNF3)	0.09	0.15	0.62	0.5374	0.00232
Active (WNE1)	0.06	0.16	0.36	0.7165	0.00080
Competitive (WNE2)	-0.01	0.12	-0.07	0.9441	0.00003
Achieving (WNE3)	-0.15	0.15	-1.01	0.3151	0.00617
Decisive (WNE4)	-0.16	0.09	-1.74	0.0837	0.01843
Dependable (WND1)	0.20	0.14	1.43	0.1546	0.01243
Social Desirability (WND2)	0.06	0.14	0.41	0.6823	0.00102

* Statistically significant – $p < 0,0001$

Table 5 shows that the personality variables (as measured by the WSQ) predict 23.62% of the variance in overall integrity (as measured by the CPS). The personality variables contributed respectively to the variance in Integrity as follows: Assertiveness 1,50% ($sr_i^2 = 0,01050$), Social Confident 2,50% ($sr_i^2 = 0,02508$), Team Orientated 1,50% ($sr_i^2 = 0,01502$), Considerate 0% ($sr_i^2 = 0,00002$), Practical 1,64% ($sr_i^2 = 0,01643$), Innovative 0,13% ($sr_i^2 =$

0,00133), Adaptable 3,00% ($sr_i^2 = 0,03003$), Forward Thinking 0% ($sr_i^2 = 0,0003$), Detail Conscious 2,41% ($sr_i^2 = 0,02412$), Resilient 1,91% ($sr_i^2 = 0,01917$), Emotionally Controlled 0,17% ($sr_i^2 = 0,00174$), Optimistic 0,23% ($sr_i^2 = 0,00232$), Active 0,08% ($sr_i^2 = 0,00080$), Competitive 0,0% ($sr_i^2 = 0,00003$), Achieving 0,61% ($sr_i^2 = 0,00617$), Decisive 1,84% ($sr_i^2 = 0,01843$), Dependable 1,24% ($sr_i^2 = 0,01243$) and Social Desirability 0,1% ($sr_i^2 = 0,00102$).

The unique variances explained by the independent variables were not practically significant. Given that 23,62% of the variance in integrity was explained in total by these independent variables ($R^2 = 0,2362$), and that sr_i^2 adds up to 0,18517 (18,52 %), it is clear that the remaining 5,10% of the variance can be attributed to interaction between the independent variables.

The results of the regression analysis with Motivation Distortion (as measured by CPS2) as independent variable and personality traits (as measured by the WSQ) as dependent variables are shown in Table 6.

Table 6

Moderated Regression with Motivation Distortion as Dependent Variable (DV) and Personality Traits as Independent Variables (IV)

Variable	Parameter	SE	T	P	sr_i^2
DV = Motivation Distortion (CPS2); IV = Personality Variables $F = 2,71 R^2 = 0,2793 \sum sr_i^2 = 0,14951$					
Intercept	-1.34	16.66	-0.08	0.9359	
Assertive (WNR1)	0.64	0.45	1.41	0.1603	0.01141
Social Confident (WNR2)	-0.15	0.29	-0.52	0.6055	0.00153
Team Orientated (WNR3)	-0.20	0.35	-0.57	0.5685	0.00187
Considerate (WNR4)	0.19	0.45	0.43	0.6669	0.00106
Practical (WNT1)	-0.76	0.48	-1.59	0.1140	0.1449
Innovative (WNT2)	-0.51	0.41	-1.22	0.2234	0.00856
Adaptable (WNT3)	-0.17	0.37	-0.46	0.6450	0.00122
Forward Thinking (WNT4)	0.08	0.39	0.20	0.8415	0.00023
Detail Conscious (WNT5)	0.72	0.39	1.84	0.677	0.01943
Resilient (WNF1)	0.02	0.32	0.06	0.9490	0.00002
Emotionally Controlled (WNF2)	-0.38	0.22	-1.73	0.0868	0.01704
Optimistic (WNF3)	0.70	0.39	1.77	0.0794	0.01788
Active (WNE1)	1.00	0.45	2.25	0.0265	0.02885
Competitive (WNE2)	0.02	0.34	0.05	0.9565	0.00001
Achieving (WNE3)	-0.26	0.40	-0.66	0.5120	0.00247
Decisive (WNE4)	0.33	0.25	1.31	0.1940	0.00976
Dependable (WND1)	-0.15	0.39	-0.40	0.6902	0.00091
Social Desirability (WND2)	0.60	0.40	1.49	0.1378	0.01276

Statistically significant – $p < 0,0001$

Table 6 shows that the personality variables (as measured by the WSQ) predict 27,93% of the variance in overall integrity (as measured by the CPS). The personality variables contributed respectively to the variance in Motivational Distortion as follows: Assertiveness 1,14 % ($sr_i^2 = 0,01141$), Social Confident 0,15% ($sr_i^2 = 0,00153$), Team Orientated 0,18% ($sr_i^2 = 0,00187$), Considerate 0,11% ($sr_i^2 = 0,00106$), Practical 1,44% ($sr_i^2 = 0,01449$), Innovative

0,86% ($sr_i^2 = 0,00856$), Adaptable 0,12% ($sr_i^2 = 0,00122$), Forward Thinking 0,02% ($sr_i^2 = 0,00023$), Detail Conscious 1,94% ($sr_i^2 = 0,01943$), Resilient 0% ($sr_i^2 = 0,00002$), Emotionally Controlled 1,70% ($sr_i^2 = 0,01704$), Optimistic 1,79% ($sr_i^2 = 0,01788$), Active 2,89% ($sr_i^2 = 0,02885$), Competitive 0% ($sr_i^2 = 0,00002$), Achieving 0,24% ($sr_i^2 = 0,00247$), Decisive 0,97% ($sr_i^2 = 0,00976$), Dependable 0,09% ($sr_i^2 = 0,00091$) and Social Desirability 1,28% ($sr_i^2 = 0,01276$). The unique variances explained by the independent variables were not practically significant. Given that 27,93% of the variance in integrity was explained in total by these independent variables ($R^2 = 0,2793$), and that sr_i^2 adds up to 0,14951 (14,95 %), it is clear that the remaining 12,98% of the variance can be attributed to interaction between the independent variables.

DISCUSSION

This study showed overall integrity to be negatively related to adaptability. The adaptable scale on the WSQ is concerned with the degree to which an individual is open to new approaches and enjoys change. Highly adaptable people enjoy variety and change and may be potentially distracted from the task at hand, while people who score lower on the scale are more likely to cope with routine and finish the projects they are working on. With regard to integrity, people with a low score on adaptability would be more rule-bound, conscientious, self-controlled and stable. One would expect that this person would also exhibit behaviour that is more routine bound and does not get distracted easily.

The Motivational Distortion scale was positively related to Detail Conscious, Active and Social Desirability. The Detail Conscious Scale is concerned with how tidy, precise and thorough individuals are in relation to their work and their surroundings. High scorers will usually be happy to undertake tasks requiring accuracy and precision and are likely to keep their workplace in order. They tend to be focused on detail and to be systematic in their approach. Low scorers tend not to check work thoroughly and may not pick up errors or omissions. The Active Scale is concerned with an individual's energy and stamina and also their preference for high levels of activity and pace of work. High scorers prefer to keep busy

and enjoy being involved in tasks requiring lots of energy. Low scorers may tire easily and tend to avoid tasks requiring reserves of energy or strenuous effort. The Social Desirability scale looks at the extent to which individuals have been concerned about presenting a positive self-image of themselves to others. High scorers can have a strong desire to please others, while lower scorers indicate a rather self-critical attitude and a tendency to be overly negative about their behaviour. The Motivational Distortion Scale indicates to what extent individuals tend to portray themselves in a most favourable way. A very high score indicates that the test taker probably manipulated the answers so as to put himself in a more favourable light, and that the test is not a reliable reflection of the individual's personality. One would expect a person who tries to portray himself as favourable as possible to be very focused on detail in order to strive for accuracy and precision. Individuals are also more likely to keep a high pace of work and to work at a high pace in order to finish tasks when they wish to present a positive image of themselves. One would expect the Social Desirability scale to correlate strongly with the Motivational Distortion scale, since both measure the extent to which an individual portrays himself in a favourable way. High scores on the scales of Detail Conscious, Active as well as Social Desirable will probably be indicators of a person who scored high on the Motivational Distortion scale.

The Random Response scale was related to Emotionally Controlled. Emotional control is concerned with the degree to which an individual is open or restrained in the expression of their emotions or feelings. High scorers are more controlled in expressing their emotions and are more likely to exercise restraint in the expression of their true feelings. Low scorers are more prone in showing their feelings. They may have emotional outbursts, show their irritation and tell people exactly how they feel. The Random Response scale is used to determine whether a test taker has read the questions carefully or whether he simply responded at random. A high score on this scale indicates that the person probably responded randomly. The results show that the higher an individual scored on Emotional Control, the higher he scored on the Random Response scale. One could postulate that an individual who is emotionally controlled and restrained in the expression of his or her emotions is more likely to respond randomly in an attempt to withhold information and not to mirror his true feelings.

Using only the first canonical set of variables, the results of the canonical correlations showed that Overall Integrity and Motivational Distortion correlate with Assertiveness,

Socially Confident, Considerate, Detail Conscious, Optimistic, Active, Dependable and Social Desirability. Using the factor analysis done by Barrick and Mount (1991) on the WSQ, the items that correlate in the first set of canonical variates overlap with those factors that formed part of Factor 1 which Barrick and Mount (1991) related to conscientiousness. Included in their Factor 1 were Detail Consciousness, Dependable, Considerate, Social Desirability and Active. Optimistic formed part of Factor 2, which Barrick and Mount (1991) related to Emotional Stability. Assertive formed part of Factor 3 (Extraversion), while Socially Confident formed part of Factor 4, which appeared to be equivalent to the Agreeableness construct on the Big Five.

A moderated regression analysis was conducted to determine the proportion of variance in the two integrity scores that is predicted by personality. It seems as if 23,62% of the variance in Overall Integrity is predicted by the personality variables. Adaptable, Forward Thinking, Detail Conscious and Social Confident made the most significant contributions to Overall Integrity (between 2% and 3%), while Assertive, Team Orientated, Practical, Resilient, Decisive and Dependable also contributed more than 1% each to the prediction. The three most significant contributors to Overall Integrity, Adaptable, Forward Thinking and Detail Conscious, all form part of the thinking styles division on the WSQ. The four personality variables contributing most to integrity are mostly related to the thinking styles of an individual and the high confidence the person has in himself or his decisions. It was found that a person high in integrity should be able to plan and prepare ahead and foresee the consequences of his decisions. He should be able to be accurate and pick up on smaller details. A person with integrity should readily adapt to new situations and accept change without getting out of his depth and having to adapt his morals.

The personality variables predicted 27,93% of the variance in Motivation Distortion. The Practical scale made the most significant contribution (14,49%), while the Active scale contributed the second most (2,88%) to this scale. Assertive, Detail Conscious, Emotionally Controlled, Optimistic and Social Desirability also contributed more than 1% each to the prediction. One explanation for the high contribution by the Practical scale could be that the individual who applies for a vacancy expects the employer to demand certain behaviour and because practical people will get into the detail of how things work, they will “pick up on” the expected behaviour and adapt their answer accordingly in order to impress the employer. More in-depth research into the relationship between these two factors could be interesting.

The Active scale is concerned with an individual's energy and stamina and it would make sense that an individual will try to portray a very hard-working, high pace of work image to an employer, therefore manipulating answers to portray positive behaviour. No applicant will portray a laid-back attitude towards work when applying for a job. The novice applicant will do better to portray high levels of activity and a preference for a high pace of work.

In conclusion, this research supports Wanek (1999) that the construct of integrity is ill defined. It was found that integrity is moderately related to certain personality traits, but not solely to one specific trait. If integrity could be defined in terms of the findings of this research, a possible profile of a person that holds high integrity standards could perhaps be more valuable. A specific definition of integrity could be very simply put: the aligned actions between an individual's moral awareness, words and deeds, which allow that individual to consciously and unconsciously act in a very productive, but socially desirable, way in group situations or individually. The four personality traits that could consistently be correlated to integrity throughout this research were: assertive, socially confident, detail conscious and dependable. These four personality traits related to the Big Five factors of Extraversion, Agreeableness and Conscientiousness if the factor analysis done by Barrick and Mount (1991) could be used to relate the personality traits of the WSQ to the Big Five dimensions of personality. This individual will be relatively persuasive, and very self-assured; he will be very much focused on detail – systematic, precise, accurate and able to pick up omissions quickly, he will respect authority, be hardworking, conscientious and trustworthy.

An employee who can be described in the above-mentioned way, could be of great value to any employer. This employee could be relied upon and is unlikely to engage in counterproductive behaviour like theft, absenteeism, fraud, etc. He will be loyal, follow instructions and be able to finish tasks on time. These are all valuable contributions an employee can make to a company, irrespective of his position or line of work. Thus, it will be worthwhile for any employer to screen for integrity when going through a recruitment process.

RECOMMENDATIONS

When screening for integrity, Craig and Smith (2000) suggested applicants to be selected on the basis of a multivariate profile and it should be more difficult for them to guess the “correct” patterns of responses. The practical implications of the high- or low-integrity profiles become evident when we consider that in selection settings overt integrity tests are normally used with dichotomous cut scores. Coming back to overt and covert integrity tests, the researcher suggests the aim of the assessment should be made clear. If the focus is on detecting lies or deviant behaviour, an overt integrity measure should be used where deviant behaviour is directly mentioned. If the focus is on counterproductive behaviour in general, personality-based integrity measures should rather be used. The proactive screening of individuals who are more likely to behave in a counterproductive way would certainly yield a financial benefit to organisations. Money is unnecessarily lost because of low productivity, absenteeism, fraud and substance abuse and the best way to prevent this loss of income is by screening applicants before they become employed.

It is important to note that in the specific screening process where this research was done, different kinds of interviews were also used for further assessment of candidates. All information the administrators received from the questionnaires and the candidates on past omissions or deviant behaviour were verified in the interviews. The success rate using this assessment centre has not yet been determined since the CPS is a fairly new instrument. The researcher suggests that some follow-up research be done on the success rate using these instruments, and with the success rate of the candidates that do get employed after a few years.

This research suggests that future research into integrity be done with a combination of variables and person-orientated methodology as these two research types complement each other. A personnel selection programme to control employee ethics should ideally be used in conjunction with other loss control programmes, such as training session designed to teach current employees how to exhibit the highest level of integrity while coping with various workplace pressures and temptations (Jones, Arnold & Harris, 1990).

The situational circumstances in which the candidates are going to work should be strongly considered, since these will have an influence on deviant behaviour. Researchers should focus on the situation and the person as well as the interaction between the two (Mikulay, Neuman & Finkelstein, 2001).

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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

In this chapter, conclusions about the literature findings and the results of the empirical study are made. Furthermore, the limitations of the present study are discussed and recommendations for the organisation and future research presented.

3.1 CONCLUSIONS

Conclusions are made in the following section in respect of the specific literature objectives and the empirical findings obtained in the present study.

3.1.1 Conclusions in terms of the specific objectives

The specific objectives for the study were set out as follows:

- *To conceptualise integrity from the literature.*

Integrity is sometimes understood as resisting temptation, but it often requires action and proactive behaviour – it involves more than “not giving in”. Integrity is essentially moral courage; the will and willingness to do what one knows one ought to do (Solomon, 1992). Hitt (1990) defined integrity as a driving force in the movement towards consistency between values and actions. It acts to preserve the whole by accepting polarities, appreciating differences and finding connections that transcend and encompass all points of view. Petrick and Quinn (1997) described integrity as the individual process of repeated alignment of moral awareness, judgement, character and conduct that demonstrates balanced judgement and promotes sustained moral development. Three dimensions of integrity form part of this definition. Individuals with integrity demonstrate balanced moral judgement in resolving issues, routinely align their psychological process of awareness, judgement, character and conduct in behaving responsibly, and sustain their development of moral reasoning from narrow self-interest, to universal principled regard for others. Petrick and Quinn (2001) defined it as the quality of moral self-governance at the individual and collective levels.

Woolley and Hakistan (1992) identified a number of separate elements underpinning integrity. These include conventional commitment (loyalty), active conscientiousness (finishing tasks) and social conformity (following instructions). Simons (2002) found behavioural integrity to be the perceived pattern of alignment between the actor's words and deeds. This definition does not focus on morality or principles, but rather on the extent to which stated principles are seen as aligning with actions. Hunter (1999), developer of the Contextual Performance Scale, defined integrity as behaviour that conforms to expected ethical and work norms in an organisation. The Oxford dictionary (1995) defines integrity as the quality of being honest and having strong moral principles or the condition of being whole and not divided. Integrity has also been labelled as honesty, conscientiousness, dependability, stability, reliability and trustworthiness. Wanek (1999) found the construct of integrity to be ill defined. In order to advance validation of the construct, he suggested research to focus on what integrity is related to and, conversely, on what it is not related to.

The empirical results of the current study show an individual with integrity as relatively persuasive and very self-assured; he will be very much focused on detail – systematic, precise, accurate and able to pick up omissions quickly, he will respect authority, be hardworking, conscientious and trustworthy.

- *To conceptualise personality dimensions from the literature.*

The Big Five personality traits are Conscientiousness, Agreeableness, Emotional Stability, Extraversion and Openness to Experience. Conscientiousness refers to conformity and socially prescribed impulse control (Hogan & Ones, 1997). According to Barrick and Mount (1991) it includes volitional traits (hardworking, achievement-orientated, responsible, careful, planning and persevering). This factor is expected to relate to job performance because these characteristics attribute to accomplishing tasks in all jobs. Agreeableness has been labelled as social conformity and includes traits such as being courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted and tolerant. Barrick and Mount (1991) associate Emotional Stability with anxiousness, being depressed, angry, embarrassed, emotional, insecure and worried. The other two Big Five traits are Extraversion and Openness to Experience. Traits associated with Extraversion include sociability, assertiveness, talkativeness and being active. Traits mostly related to the factor of Openness to Experience

include being imaginative, cultured, serious, original, broad-minded, intelligent and artistically sensitive (Barrick & Mount, 1991).

The Work Styles Questionnaire is based on the original Occupational Personality Questionnaire from SHL. The OPQ is a questionnaire that assesses personality at work and is based on the Big Five personality structure. A factor analysis on the WSQ was performed by Barrick and Mount (1991) and five constructs were found. These five factors showed patterns similar to those of the Big Five.

- *To conceptualise the relationship between integrity and personality dimensions from the literature and empirically.*

Sackett and Wanek (1996) questioned the relationship between integrity and specifically the Conscientiousness dimension of the Big Five. Ones, Viswesvaran and Schmidt (1993) have provided evidence indicating that personality measures capturing aspects of conscientiousness provide potentially viable measures of integrity. Sackett and Wanek (1996) went one step further to determine whether conscientiousness explains the predictive validity of integrity tests. Murphy and Lee (1994) tested the role of conscientiousness in integrity as a result of the conclusion by Barrick and Mount (1991) that this factor is a broad dimension of personality and known to be relevant to a wide range of work-related variables. They found that individuals with low scores on conscientiousness also tested low on integrity questionnaires. Thus, they suggested conscientiousness as an explanatory construct for integrity. They concluded that although these two constructs are strongly related, they are not identical. Conscientiousness includes dependability, perseverance and achievement orientation, whereas integrity is more focused on honesty and avoidance of counterproductivity. Ones et al. (1993) stated that in the integrity-testing literature, conscientiousness has been viewed from its negative pole (e.g. irresponsibility, carelessness and violation of rules).

Ones et al. (1993) found Extraversion and Openness to Experience least important for the prediction of integrity. Ones and Viswesvaran (2001), Sackett and Wanek (1996) and Ones et al. (1995) found Conscientiousness to have the most overlap with integrity tests, although they also considered scores on Agreeableness and Emotional Stability scales. They found that, for both overt and covert integrity tests, the highest correlations were with

Conscientiousness, Agreeableness and Emotional Stability, and that the relations with Extraversion and Openness to Experience were negligible. Sackett and Wanek (1996) found that, although Conscientiousness overlaps a lot with the construct of integrity, Conscientiousness, Agreeableness and Emotional Stability each makes an independent contribution to integrity test scores. Craig and Smith (2000) conducted a person-orientated study that used the Five Factor Model of personality to identify multiple personality configurations in terms of integrity configurations. In the one cluster analysis they found high integrity patterns to be characterised by low Extraversion and Openness, but high Agreeableness, Conscientiousness and Emotional Stability. The other cluster analysis found the same set of characteristics present in persons with high integrity, except with regard to Agreeableness, which showed a low score. They suggested low Extraversion to be an important determinant of a high integrity profile. Rieke and Guastello (1991) raised another significant point. According to them, integrity measures are primarily correlated to measures of conscientiousness, low anxiety and agreeableness. Their concern is that people in the creating and helping professions, such as artists and psychologists, often score low on Conscientiousness.

Lilienfeld, Alliger and Mitchell (1995) addressed a few unresolved issues in their article. One of these issues was fake-ability or the extent to which integrity tests are susceptible to impression management. Impression management has been defined by Winfred et al. (2001) as a test taker's active attempts to create an image as a hard-working, conscientious, punctual person – knowing full well that he is none of these. Impression management is in the service of pleasing a prospective employer, and the self-description can be changed depending on the perceived desires of another employer. Craig and Smith (2000) used a person-oriented approach to integrity research, which implies a process of identifying individuals with certain characteristics and then examining outcomes for those individuals. This approach seemed to identify disparate, but internally homogeneous subgroups for which different rules apply by clustering different patterns of scores on the Big Five in order to determine a high integrity profile. They suggest it may be possible for two individuals to exhibit the same stand on integrity, but display different profiles on the Big Five Dimensions.

The four personality traits that could consistently be correlated to integrity throughout this research were: assertive, socially confident, detail conscious and dependable. This individual will be relatively persuasive, and very self-assured; he will be very much focused on detail –

systematic, precise, accurate and able to pick up omissions quickly, he will respect authority, be hardworking, conscientious and trustworthy. The employee who exhibits these characteristics could be of great value to any employer. This employee could be relied upon and is unlikely to engage in counterproductive behaviours like theft, absenteeism, fraud, etc. He will be loyal, follow instructions and be able to finish tasks on time.

- *To use personality to predict integrity.*

This research found integrity to be moderately related to certain personality traits, but not exclusively to one specific trait. If integrity could be defined in terms of the findings of this research, a possible profile of a person with high integrity standards could perhaps be more valuable. A specific definition of integrity could be very simply put: the aligned actions between an individual's moral awareness, words and deeds, which allow that individual to consciously and unconsciously act in a very productive, but socially desirable, way in group situations or individually. The four personality traits that could consistently be correlated to integrity throughout this research were: assertive, socially confident, detail conscious and dependable. These four personality traits related to the Big Five factors of Extraversion, Agreeableness and Conscientiousness if the factor analysis done by Barrick and Mount (1991) could be used to relate the personality traits of the WSQ to the Big Five dimensions of personality.

3.2 LIMITATIONS OF THE STUDY

The following limitations have emerged in the course of the study:

- The used data were already administered before this study was initiated, which made it impossible to obtain more or to verify information from the questionnaires with the applicants. For example: no biographical data regarding sex, age or educational levels of the applicants were available.
- The CPS has not yet been registered with the board and little information was available for publication or use. This study is one of the first to study the CPS outside a developmental environment and to measure its performance in practice.

- The available information on the construct of integrity is limited to the articles of a small number of researchers. A special issue is that this construct has not been studied much outside the American or European context (as is the case with much modern psychology). Broader interests in the construct, specifically from an African perspective, would be appreciated and could contribute to our understanding of the concept.

3.3 RECOMMENDATIONS

Recommendations pertaining to the security company where the applicants were tested, as well as recommendations for future research are made in this section.

3.3.1 Recommendations for the organisation

- Longitudinal studies should be undertaken to ascertain the success rate of the combined usage of these two measures for the assessment of integrity.
- The CPS should be validated and accredited as soon as possible to assist in the marketing of the instrument.
- The results of this study indicate that the CPS could be a useful tool in the screening of applicants. It does, however, not predict a large amount of variance in integrity. The instrument will be more useful as part of a larger screening process than by itself in predicting employee success.
- This research supports the recommendation of Jones, Arnold and Harris (1990). A personnel selection programme to control employee ethics should ideally be used in conjunction with other loss control programmes, such as training sessions designed to teach current employees how to exhibit the highest level of integrity while coping with various workplace pressures and temptations.
- Mikulay, Neuman and Finkelstein (2001) suggested that when recruiting for new employees, the situational circumstances in which the candidates are going to work

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