A Psychometric Evaluation of the Integrity Profile 200 (IP 200) and the Adaptation Thereof for Use in the South African Police Service

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Abstract

Integrity is an essential element of orderly co-existance and an important facet of professional policing. The objective of this study was to psychometrically evaluate the Integrity Profile 200 (IP 200), an instrument widely used in South Africa, to assess its utility as an integrity measure for use in the South African Police Service. Although the literature indicates that the constructs measured with the IP 200 are sound, an exploratory investigation in the South African Police Service reveals poor reliability and unacceptable inter-item correlations. This suggests poor factorial validity (model fit). Subsequently an exploratory factor analysis (N = 1457) was done to adapt the scale and improve the model fit. Four factors were extracted and analysed, and satisfactory psychometric properties were found for these factors, including the absence of race-based item bias. The factors are: (i) Integrity restricting orientation; (ii) Moral conscientiousness and accountability; (iii) Organisational/management integrity, and (iv) Lie scale. The results account for a significant deviation and simplification from the original instrument structure. It is recommended that the original IP 200 should not be used in this context but that the adapted scale be used.

Introduction

Integrity in a policing context has specific importance because the relationship with the public is of an asymmetrical nature owing to the elements of power and authority (Benson, 2010). Furthermore Walkin (2005) is of the opinion that the people in professions that provide a service have a higher social purpose, and that they ought to be good people. Gottschalk (2010), Lee and Vaughn (2010), Miller (2010), and Wolfe and Piquero (2011) suggest that the public has social expectations of the police to set an example and that the integrity of police officials should be above suspicion. Burger (1999) and the Office of Police Integrity (2009) indicate that police integrity should be broadly defined on the basis of related concepts, namely principleness, creditworthiness, reliability, pure-mindedness, worthiness, honesty, ethics, incorruptibility, conscientiousness and standards. Benson (2010, p. 190) defines police integrity as "the tendency of a police official to resist the temptation to abuse the powers and privileges of his position".

Although high integrity may be expected of police officials, divides in integrity-deviating behaviour often occur (Benson, 2010; Gottschalk, 2010; Huberts, Kaptein & Lasthuizen, 2007; Lee & Vaughn, 2010; Schafer & Martinelli, 2008; Wright, 2010). Haarr (1997), Lee and Vaughn (2010), and Miller (2010) divide integrity-deviating behaviour by police officials into four categories: work avoidance and manipulation, deviant behaviour by employees against the organisation, employee deviance in the interests of the organisation, and informal remuneration. Deviant behaviour also occurs in the South African Police Service (SAPS), as reflected in many newspaper reports and the damming report of Holtzhauzen (2001). Benson (2010), Burger (1999) and Grobler (2003) have identified possible reasons for a lack of integrity in SAPS members. These include inadequate and insufficient policy and procedures, managers whose behaviour is not in line with the SAPS code of ethics, the inability of the organisation to fulfil the lifestyle aspirations of it members, and inadequate selection and recruitment.

According to Benson (2010) and Grobler (2003), the SAPS have responded to the issue of integrity-deviating behaviour. In an attempt to deliver a responsible, effective and high quality service with honesty and

integrity, a corruption and fraud prevention plan, disciplinary regulations, as well as an ethical code were introduced. Various writers (Kaptein & Avelino, 2005; Miller, 2010; Svensson, Wood & Callaghan, 2010) support the institutionalisation of an ethical code. Arnold and Lampe (1999) and Miller (2010) maintain that this is often regarded as the first step in addressing integrity and ethical behaviour especially with regard to the organisation's clients. In spite of these initiatives and actions to control deviant behaviour, for example corruption in the SAPS, the SAPS is seen as one of the least trustworthy organisations in South Africa (Benson, 2010). The process of addressing integrity-limiting behaviour in an organisation, and thereby improving integrity in the organisation, requires continuous attention (Arnold & Lampe, 1999; Miller, 2010; Schafer, 2010b). Self-examination is a first step in addressing integrity in an organisational context (Kaptein & Avelino, 2005; Office of Police Integrity, 2009; Sellbom, Fischler & Ben-Porath, et al, 2007). Self-examination will, among other things, provide information regarding possible risk areas and individuals, and assist in the management and development and implementation of integrity interventions. If these risk areas and individuals cannot be removed from the organisation, an active reorientation with regard to the organisation's values and norms should be considered (Gruys, Stewart, Goodstein, Bing & Wicks, 2008; Lee & Vaughn 2010; Miller, 2010; Office of Police Integrity, 2009). This self-examination relates to the need for a measure of integrity.

The measurement of integrity, however, is a controversial subject in organisational and industrial psychology (Congress of the US, 1990; Huberts, et al, 2007; Sellbom, et al, 2007), mainly because there is little or no research to support the instrumentation (Congress of the US, 1990; Murphy, 1995). It is, however, important to have a reliable and valid instrument available for measuring integrity (Congress of the US, 1990; Kaptein & Van Reenen, 2001; Murphy, 1995) if one wishes to predict integrity-related behaviour (Sellbom, et al, 2007). A further controversy related to integrity measures is that these measures historically discriminate against minority groups (Congress of the US, 1990). This could prove to be a pertinent issue in the South African context.

Some integrity measuring instruments focus on operational integrity and are based on situational judgement measurements (Gottschalk, 2010; Miller, 2010; Office of Police Integrity, 2009). The development of such tests is very costly, and appropriate instruments are not readily available in South Africa. In order to address the issue of the measurement of integrity in the SAPS, a more readily available instrument of measurement needs to be found and used. Although many traditional psychometric tests are available, no such measuring instrument for integrity has yet been standardised for use in the SAPS (Grobler, 2003). The IP 200 questionnaire, a questionnaire readily available and often used in South Africa, and the integrity model on which it is based, have also not yet been empirically evaluated to verify that it explains integrity as a construct in the SAPS (Grobler, 2003). Also, no other integrity measures have been standardised in the SAPS. To address this gap, the objectives of this study are to administer the IP 200 to assess its reliability and factorial validity, and to evaluate the instrument in terms of race bias. Factorial validity will be a proxy for the model fit of the instrument.

Integrity measuring instrumentation should be standardised and interpreted specifically in terms of the organisation, because what may be acceptable in one organisation or country will not necessarily be acceptable in another (Department of Public Service and Administration, 2001; Kaptein & Van Reenen, 2001). Gottschalk (2010) and Huberts, et al (2007) support this notion, and they suggest that, because integrity is such an important concept in policing, integrity-measuring instruments should be evaluated differently to other professions and should be organisation-specific.

Having an effective and comprehensive measure of integrity may be a forerunner to taking many corrective actions (Sellbom, et al, 2007). Gottschalk (2010), Huberts, et al (2007), Kaptein and Van Reenen (2001) and Miller (2010) support Arnold and Lampe's (1999) view that a self-investigation by means of an integrity measure is essential for any integrity intervention in order to develop an integrity profile for every individual and group in the organisation. Melamed and Jackson (1995) as well as the Office of Police Integrity (2009) are of the opinion that an organisation's values and creditworthiness can be determined by the degree to which it is

prepared to address the internal endemically, and propose that valid and reliable measuring instruments (psychometric instruments) can play an important role in this process (2010).

Method

Research Design

A survey design was chosen for the research. This specific design entails a cross-sectional design, where a sample of the population is studied in the same time period (Shaughnessy & Zechmeister, 1997). This design is applicable when an attempt is being made to determine the relationships between the variables in a population. According to Shaughnessy and Zechmeister (1997), this design is ideal for descriptive and predictive functions.

A survey design was used for the empirical investigation. According to de la Rey (1978), this method is a backward look where the researcher gathers information on a particular phenomenon and then processes it over time. On the basis of this information the course of the phenomenon is determined and the factors that influence its course are established. The survey method will be based on the administration of questionnaires, which, according to Dooley (1984), is the method most used in the social sciences, and which Glick (1985) and Xenikou and Furnham (1996) propose as the best method for measuring organisational climate.

Participants

Two groups of participants were used in the study. The first group (later called the exploratory group) consisted of 402 participants, from two police stations, namely Alexandra and Kathlehong. The IP 200 was administered on them. Following the unsatisfactory results achieved with this sample, a much larger sample (N =1,776) was drawn in order to perform the required exploratory factor analysis. This involved 14 police stations. The 14 stations were those identified by political leaders as part of a larger renewal strategy in SAPS, which included looking at issues of integrity. The police stations consisted of large, medium and small stations.

Measuring Instrument

The Integrity Profile 200 was selected as instrument by the institutional sponsor (SAPS Management) due to its face validity appropriateness to the law enforcement environment. The test distributor granted permission to conduct further research to adapt / customise the instrument for the environment. The Integrity Profile 200 (1999) is based on a model developed by scientists from various disciplines in the social sciences and the humanities (Fick, 2001). The most important step in the development of the model was defining the construct widely enough so that all aspects of integrity were covered (Fick, 2001; Integrity Profile 200, 1999). These constructs cover the broad spectrum of integrity, from the development, correction or remediation of integrity, to the defence mechanisms that are used to justify behaviour that violates integrity. From this Fick (2001) defines nine substructures of integrity, which are represented in the Integrity Profile 200. These are *socialisation, reliability, creditworthiness, work ethic, dysfunctional behaviour, integrity limiting attitude, values, manipulative abuse of power, support-transformation, and management integrity.* Numerous resemblances between Fick's model and literature could be found, notably *socialisation* (Bayram, Gursakal & Bilgel, 2009; Miller, 2010; Schafer, 2010a; Wolfe & Piquero, 2011), *reliability* (Gruys, et al, 2008; Lee & Vaughn 2010; Simons, 1999; South African Police Service, 2002), *creditworthiness* (Benson, 2010; Lee & Vaughn 2010; Office of Police Integrity, 2009; Republic of South Africa, 1997; Van Aswegen & Engelbrecht, 2009), *work ethic* (Babović, 2000; Gruys, et al, 2008; Schafer & Martinelli, 2008; Svensson, et al, 2010), *dysfunctional behaviour* (Lee & Vaughn 2010; Sellbom, et al, 2007; Trevinyo-Rodriguez , 2007; Van Duyne, Stocco, Bajovic, Milenović, & Lojpur, 2010), *integrity limiting attitude* (Benson, 2010; Lee & Vaughn 2010; Miller, 2010; Trevinyo-Rodriguez, 2007), *values* (Holtzhauzen, 2001; Matei, Matei & Savulescu, 2010; Svensson, et al, 2010; Van Duyne, et al, 2010), *manipulative abuse of power* (Huberts, et al, 2007; Kempen, 2001; Lee & Vaughn 2010; Schafer, 2010a), *support-transformation* (Burger, 1999; Hkulalwa, 2001; Van Aswegen & Engelbrecht, 2009; Wolfe & Piquero, 2011), and *management integrity* (Huberts, et al, 2007; Schafer, 2010a, 2010b; Sechrest & Burns, 1992; Sellbom, et al, 2007). It is clear from the aforementioned that many authors on integrity include factors or elements of integrity as conceptualised by the IP 200 Integrity Model (Fick, 2001) in their writings. It would

thus appear that this model is embedded in present literature on integrity, and that it explains the concept broadly enough as to probably be of use in the SAPS.

The IP 200 is an integrated instrument consisting of nine substructures that have been specifically developed to measure the multidimensionality of integrity. Each substructure is measured with 20 items. The instrument also contains a monitoring scale, consisting of a lie scale (10 items) and a consistency scale comprising a combination of 20 items (Integrity Profile 200, 1999; 2000). The respondents provided answers on a 5 point Likert Scale. Misrepresentation is often a problem encountered in most overt integrity tests (Murphy, 1995), and a lie scale or consistency scale is therefore important for placing the results into perspective (Fick, 2001).

Previous research conducted in the United States of America indicates that the IP 200 has acceptable psychometric characteristics. In order to determine reliability, a previous study ($N = 2\,200$) made use of two techniques, namely the half-split method and the test-retest method. The reliability coefficients that were reported were 0.92 and 0.90 respectively (Integrity Profile 200, 1999; 2000). IP 200 scores were also compared with the "Integrity Assessment Centre" (IAC) results of 211 individuals in supervisory positions. The reported correlation coefficient of 0.76 indicates a coefficient of determination of 0.58, suggesting a 58% shared variance between the measures. A further study in which 384 individuals were evaluated using the IP 200, IP 200 scores correlated the socialisation and functionality vs. dysfunctional factors (0.73 and 0.79 respectively; Integrity Profile 200, 2000).

Statistical Analysis

The statistical analysis was carried out using the SAS program (SAS Institute, 2000). Cronbach's alpha coefficients, inter-item correlations, analysis of variance, as well as explorative factor analysis were calculated.

The Cronbach's alpha coefficient indicates the proportional variance error of a particular scale, while the inter-item correlation is a measurement of its internal consistency. According to Clark and Watson (1995), the inter-item correlation is an important index for supplying information that supplements the alpha coefficients of a scale. Decisions will be guided by cut-off scores for reliability of $\alpha > 0.70$ (Nunnally & Bernstein, 1994) and an inter-item correlation of $0.15 < r < 0.50$ (Clark & Watson, 1995).

An extension of Cleary and Hilton's (1968) method was used to determine item bias (Van de Vijver & Leung, 1997). Item bias analysis was undertaken through the use of linear regression and analysis of variance procedures. The assumption is that an item is unbiased if persons from different cultures, with the same standing on the theoretical construct that underlies the instrument, have the same score on the item (Meiring, Van de Vijver, Rothman, & Barrick 2005).

Principle component analysis was carried out to ascertain the optimal number of factors and an oblique rotation (Promax) was applied to crystallise the solution and to assist in assigning names to the factors. This was done by means of SAS FACTOR.

Results

In the exploratory part of the study, the IP 200 was administered to 402 police officers at the Alexandra and Kathlehong police station. The Cronbach's alpha coefficients and the inter-item correlations of the instrument were not satisfactory. The alpha coefficients of the substructures varied between 0.16 and 0.59, while those of the subfields varied between .09 and .73. The inter-item correlations varied between 0 and .73. These statistics did not comply with the reliability ($\alpha > 0.70$; Nunnally & Bernstein (1994) and inter-item correlation ($0.15 < r < 0.50$); Clark & Watson, 1995) guidelines. This is an indication that the substructures and subfields did not have the required internal consistency (Grobler, 2003).

Owing to the poor results that were obtained for the substructures and the subfields which were the basis of Fick's (2001) integrity model, the data obtained from the second group ($N = 1,457$) was subjected to an exploratory factor analysis. In this group most of the participants held the rank of inspector, and have been promoted in the past five years. The majority of the participants had more than 10 years' service in the SAPS and more than six years' service in their current police station. The age group that was best represented was 31–40 years. The types of work done by the participants in the police stations showed a wide distribution between

client service centre, crime prevention, administration and detective services, as well as the so-called "other" work, for example labourers and cleaners. The group under investigation consisted of 87.29% South African Police Act staff and 12.28% Public Service Act staff. With regard to the highest level of training, most of the participants had a Grade 12 qualification, in other words, the minimum requirement for appointment as a functional or uniform member. Most participants were Black (79.33%), and the official language best represented was Xhosa (16.93%), Venda (15.67%), Zulu (14.22), Tswana (14.22%) and Afrikaans (13.97%).

First-order factor analysis was carried out on all 200 variables (items) using the SAS FACTOR (N=1 457). Eleven factors with eigenvalues greater than one (1) were identified. The scree plot, however, showed a sharp levelling off to the right after the eighth factor, hence only eight factors were analysed with regard to factor loadings. The loadings on all eight factors were unacceptable (loadings < 0.35), and only four factors, which explained 53% of the variance, were included in the final factor structure. The inter-correlations of the four-factor structure of the adapted IP 200 revealed acceptable interfactor correlations, being 0.36, -0.14, -0.41, 0.29, -0.11, 0.36. This meets the guidelines of Nunnally and Bernstein (1994). As a result of these relatively strong correlations (Cohen, 1988), the four factors were rotated by means of the oblique method using a Promax rotation in order to minimise the variance of the distinguishing factors (StatSoft, 1995).

In total 68 of the 200 variables (items) loaded on the four factors, F_1, F_2, F_3 and F_4, and consisted of 26, 23, 9 and 10 items respectively. A cut-off point of 0.35 for inclusion in the interpretation of a factor was used. The factor designations were developed by inspecting the items that loaded on the four factors, and where they were grouped in the integrity model of the IP 200, which is based on Fick's (2001) model. Inspection showed that the items of F_1 were grouped largely under job behaviour, attitudes, dysfunctional behaviour and the manipulative abuse of power, as described in the IP200. We called this factor *integrity limiting orientation*. F_2 showed strong similarities with the IP 200 substructures of socialisation, reliability, work ethic and value. We called this factor *moral conscientiousness and accountability.* The items for F_3 described the integrity of management and the organisation. Items of the original subfields of the IP 200, such as participation, social responsibility, lifestyle aspirations and creditworthiness, were found in F_3. We called this factor factor *organisational/management integrity.* Lastly, F_4 agrees with the original lie scale of the IP 200, and was called as such. The squared multiple correlations (SMC), which varied from 0.84 to 0.92, are an indication that the factors are internally consistent and that they are well defined by the variables (items). The communalities of F_2, F_3 and F_4, are high, although F_1 only has average communalities. Fifty-three per cent (53%) of the variance is explained by the four factors, with F_1 being the strongest factor, which explains 19.84% of the total variance and 37.40% of the covariance.

In Table 1 the descriptive statistics, Cronbach's alpha coefficient and interim correlations of the adapted IP 200 are shown.

Table 1

Descriptive statistics, Cronbach's Alpha Coefficient and Interitem correlations for the Adapted IP 200 (N = 1457)

No. of items	Factor	*M*	*SD*	Mean[b]	Skewness	Kurtosis	α	*r* (average)
26	F_1[a]	47.69	11.45	1.83	0.39	0.89	0.83	0.16
23	F_2	38.00	10.50	1.65	1.80	6.48	0.85	0.21
9	F_3	21.58	5.04	2.40	0.03	0.59	0.73	0.23
10	F_4	31.34	5.87	3.13	-0.85	0.57	0.85	0.36

[a]Factor designations: F_1: Integrity limiting orientation; F_2: Moral conscientiousness and accountability; F_3: Organisational/management integrity, and F_4: Lie scale.
[b]Mean score presented on a 5 point scale

Apart from F$_2$ (*moral conscientiousness and accountability*), the scores of the factors are normally distributed, although the skewness and kurtosis scores are within the parameters of 2 and 7 respectively (Hair, Anderson, Tatham & Black, 1998).

The Cronbach's alpha coefficient of the factors in Table 1 are acceptable if the guideline of $\alpha > 0.70$ (Nunnally & Bernstein, 1994) is applied, as well as the inter-item correlations ($0.15 < r < 0.50$, Clark & Watson, 1995). It would thus appear that the factors have sufficient levels of internal consistency.

The mean and standard deviation should serve as guidelines when the adapted IP 200 is used. With (i) *integrity limiting orientation,* lower scores should be interpreted positively as integrity-limiting orientation refers to a tendency to justify deviant behaviour by means of rationalisation and other defence mechanisms, to display work behaviour that is characterised by a deviation from the rules and the unfair handling of other people, the misuse of power and position to one's own advantage, actions characterised by unethical behaviour, and emotional withdrawal and isolation. These factors concentrate mainly on the work environment and the rationalisation of deviant behaviour, which mostly concerns the satisfaction of needs at the cost of the organisation, junior employees and colleagues. With the second factor, (ii) *moral conscientiousness and accountability*, lower scores should be interpreted positively. A low score indicates that value is attached to membership of a group; behaviour is characterised by self-pride and self-confidence; there is the courage of one's own convictions and a high degree of responsibility and accountability, especially with regard to the attainment of goals. This factor does not focus primarily on the work environment, but rather on general values with regard to the community and individual characteristics in general. With (iii) *organisational/management integrity*, a low score indicates that the organisation provides for the employees' lifestyle aspirations and meets its social responsibilities; that the management is creditworthy, encourages participation and is willing to change. This factor therefore measures the individual's perception of and attitude towards the organisation as well as management. Lower scores on organisational/management integrity would be interpreted positively. The fourth factor does not form part of the integrity model. On (iv) the *lie scale*, a low score indicates the degree to which the respondent has distorted the results, consciously or unconsciously. A high score should be interpreted positively.

The results of the item bias analysis, carried out by means of a variance analysis on the 68 items of the adapted IP 200, were satisfactory. The bias analysis was done with regard to the Black, White and Coloured race groups. The analysis could not be applied to the Indian race group because the group comprised fewer than 50 members, which is regarded as the minimum by Van de Vijver and Leung (1997). It is thus clear that the adapted IP 200 has no race group bias (Grobler 2003).

Discussion

Integrity is an essential element of orderly co-existence and an imperative facet of professional policing, specifically in terms of the social expectations of the public (Benson, 2010; Gottschalk, 2010; Hertzog, 2000; Lee & Vaughn, 2010; Miller, 2010; Sellbom, et al, 2007; Schafer & Martinelli, 2008; Wolfe & Piquero, 2011). Integrity-deviating behaviour often occurs in police organisations, although high integrity is expected of police officials (Benson, 2010; Gottschalk, 2010; Huberts, et al, 2007; Lee & Vaughn, 2010; Schafer & Martinelli, 2008; Wright, 2010). According to Benson (2010) and Grobler (2003), this is not only an international phenomenon, but is also found within the South African context. Arnold and Lampe (1999), Kaptein and Avelino (2005), Kaptein and Van Reenen (2001), Miller (2010), Office of Police Integrity (2009), and Sellbom, et al (2007) regard self-examination (integrity audit) as a first step in addressing integrity-limiting behaviour in an organisational context.

In order to carry out any integrity audit, whether on an organisational or an individual level, it is necessary to have a standardised integrity instrument (Congress of the US, 1990; Kaptein & Van Reenen, 2001; Murphy, 1995; Sellbom, et al, 2007). The value of the utilisation of the IP 200 Integrity Model and the IP 200 questionnaire was determined within the SAPS context. It seems that the constructs of the IP 200 Integrity Model are well represented in literature. Finding literature on the dynamic interplay between the constructs

was difficult and would have been over-ambitious and beyond the scope of this paper. This could also be seen as one of the limitations of this paper which could be explored by future researchers.

The IP 200 was administered and evaluated to assess the factorial validity (model fit) of the instrument in the South African context. The psychometric properties of the IP 200 were tested with significantly poor results. It was found that the substructures and the subfields did not have the necessary internal consistency. This lead to an explanatory factor analysis, with the intention to reveal latent structure of integrity as it pertains to the South African population. After all 200 items of the IP 200 had been subjected to an exploratory factor analysis, four factors that explained 53% of the variance were included in the final factor structure. These factors are internally consistent (acceptable Cronbach's alpha values and interim correlations) and are well defined by the variables deduced from high square multiple correlations (SMC) and item communalities.

The empirical results of the study suggest an integrity model consisting of four factors, which contrasts the muti-dimensional literature based Fick (IP 200, 1999, 2000) model. The SAPS intergrity model two distinct areas, namely an individual and organisational facet. The individual integrity consists of two factors, namely *integrity-limiting orientation* (F_1) and *moral conscientiousness and accountability* (F_2), which are analogous to the work that Trevinyo-Rodriguez (2007) has done. The relatively low weighted average was obtained for F_1 and F_2 (1.83/5 and 1.65/5 in Table 1) and is an indication that the respondents are indeed accountable and have the necessary courage of their own convictions to act according to ethical principles, and are able to justify this. These results support the view of Hertzog (2000), Kempen (2001), Lersch and Mieczkowski (1996), Sechrest and Burns (1992) as well as Tswete and Selebi (2000), that there are just individuals in an organisation who are guilty of unethical and deviant behaviour, and that such individuals do not represent the norm.

In contrast to the IP 200 Integrity Model (Fick, 2001), in which the corporate facet comprises two factors, the adapted model has only one factor. This factor is called *organisational/management integrity* (F_3). The weighted average score (2.40/5 in Table 1) indicates that the organisation provides averagely for the employees' lifestyle aspirations and meets its social responsibilities only relatively, and that management's creditworthiness is not without repute. The individuals' perception of and attitude towards the organisation as well as management is thus lukewarm.

The fourth factor that was empirically obtained is concerned with the measuring instrument and is not part of the integrity model. A high weighted average was obtained, which is an indication that the participants answered the questionnaire honestly.

Item bias with regard to the different race groups (excluding Indians owing to poor representation in the population) was carried out, with the result that no significant differences between the race groups were reported. It is thus clear that the adapted IP 200 contains no uniform or non-uniform bias for the race groups in the SAPS.

The relatively positive results of the individual integrity factors are an indication that the average police official has the necessary integrity, as expected from the public. Interventions on individual level should still be institutionalised, such as integrity testing or screening during the recruitment and selection process, regular integrity testing of serving police officials to determine the organisation's (and sub-unit) integrity profile. This could also be used for targeted integrity interventions on individual as well as unit level.

If these results are regarded as a self-investigation of integrity, as suggested by many authors in the introduction, it would seem that the focus should be on organisational and management integrity, owing to the negative score obtained on this factor (See Table 1), and its impact on the indivual factors. Benson (2010), Huberts, et al (2007), Lee and Vaughn, (2010), Miller (2010), Office of Police Integrity (2009), Peterson (2004), Schafer and Martinelli (2008) and Schafer (2010a & b) indicate that there is a relationship between police officials' behaviour and their perception of the organisation. If the individual's opinion is that the organisation's values and norms (as contained in the code of conduct) are not visible in management behaviour, deviant behaviour will be manifested, which could clash with the organisation and with the attainment of goals. A positive attitude towards the organisation, management and the work of police officials will result in the individual desist-

ing from deviant behaviour, especially if it negatively affects the image of the organisation and goal attainment (Simons, 1999).

Simons (1999) maintains that management integrity is an essential component when an organisation is in the process of transformation; in other words, all management and organisational processes should be modelled on clear moral and ethical principles. According to Hertzog (2000), Kaptein and Van Reenen (2001), as well as Sechrest and Burns (1992), these principles should be communicated clearly and unambiguously to all members of the organisation. According to Burger (1999) and Kaptein and Van Reenen (2001), the example set by the management of the organisation is the most important component of organisational integrity; in other words, management behaviour should be directed by, for example, a code of ethics. In studies by Van Aswegen and Engelbrecht (2009) as well as Wallace, Hunt and Richards (1999) it was determined that there is a direct relationship between the way in which management demonstrates its values (management integrity) and organisational climate, including trust, the perception of leadership support, cooperation, conflict and role ambiguity in a police environment.

This study has specific shortcomings that should be taken into account. Reference was already made to the absence of a discussion on the dynamic interplay between the constructs of the IP 200 model. This was difficult and beyond the scope of this paper. This could be explored by future researchers. A further matter that needs to be addressed in future research is the investigation of differences in factor structures across ethnic groups.

The measurement is based on self-reporting, which was not verified by means of objective criteria. The inclusion of the lie scale somewhat compensated for it, but future researchers are urged to find objective external criteria. In many respects this research is only a first step in a long process, and objective criteria should be included in future studies. Finally, the population comprised only participants stationed at 14 police stations, which are not representative of the SAPS as a whole. However, this research covered a broad range of police stations and the standardisation data collected could be used as a starting point for future investigations.

Recommendations

The SAPS has an urgent need for an integrity measure, especially in terms of an "integrity thermometer", as Kaptein and van Reenen (2001) call it, as part of an organisational development and integrity intervention. The adapted IP 200 can be applied as such a tool and can be tentatively (experimentally) used as a selection tool for police recruits, as well as an integrity barometer in identified units, sections or police stations in order to develop integrity profiles for these.

One area in this study that has been identified as a problem in the 14 police stations are the negative perceptions of management/organisational integrity. It is recommended that interventions should be developed so that members have certainty with regard to expectations, that they see management as being consistent, that goal setting is realistic and attainable, that members obtain support from the organisation and management, and that ongoing feedback occurs through open communication and remuneration as well as through recognition. These interventions would be in line with the seven-factor development model of Kaptein and Van Reenen (2001), and the writings of Burger (1999), Hertzog (2000), Sechrest and Burns (1992), as well as Wallace, et al (1999).

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