

Adaptability Traits and Perception of Forensic Science among Investigating Police Officers (IPOs) in Nigeria

Zakariyya Muhammad Sarki and Geshina Ayu Mat Saat*

ABSTRACT

This study was aimed at determining the adaptability traits and the perception of forensic science utilization in criminal investigation of the Investigating Police Officers in Nigeria, as well as find out whether there is a relationship between the variables. The study was a sample survey; out of the 3,503 Investigating Police Officers serving in Zone 1, 401 Officers were selected using systematic sampling. Zone 1 is one of the 12 police zonal commands in Nigeria. Adaptability traits and perception scales were the instruments used to collect data. SPSS version 24 was used for the data analysis. The results showed that many of the respondents have a favourable perception of forensic science and have high adaptability traits, that is, extraversion, agreeableness and methodicalness. It was also found that there was a statistically significant relationship between the perception of forensic science and the agreeableness as well as with the methodicalness, but not with the extraversion. Consequently, it is recommended that consideration should be given to the type of personality police investigators have before they are posted to serve in the criminal investigations department, in addition to other important factors, particularly when forensic techniques are required to be used.

Keywords: Adaptability traits, Criminal justice system, Perception, Nigeria Police, Criminal investigators, Forensic science

INTRODUCTION

Regardless of the type of national governance, the function of crime prevention and control is performed by different government agencies, with police as a primary and more visible organisation compared to other agencies (Ericson, 2005). With proper management of adequate workforce and facilities, the activities of the police could ensure

* Corresponding author: zakariyya.sarki@student.usm.my

the protection of life and property (Buch, 2013), thereby contributing to the overall peace and security within a country. Nsiah-Gyabaah (2010) opined that whenever there are peaceful co-existence and good security, the potentials to overall development of a society increase. In other words, when a police organisation is adequately equipped with necessary facilities and empowered personnel who will properly man these facilities, there is a high prospect that crimes will lessen, and many aspects of national life will improve.

The continuous and rapid development in science and technology in our society have unfortunately also brought about increased dynamism of criminal activities, subsequently requiring police services to be more competent to better respond (Taylor, Fritsch & Liederbach, 2014). To this end, it is believed that the police should have modern working facilities and more importantly, personnel should develop or already have inherent traits and skills; to adapt and accept the changes as they unfold in administrative or operational spheres of the agency (Moore, 2014). Particularly, investigating police officers (IPOs) are expected to be receptive to every innovation that is brought to improve performance effectiveness (Cochran, Bromley & Swando, 2002). For example, looking at the long history of policing and despite the range of benefits forensic science offers, modern application of forensic techniques in criminal investigations is still new in many developing countries in Africa; police organisations have yet to fully adopt and utilise it.

In Nigeria, with a population of over 192 million (National Population Commission, 2018) and high crime rate, there are only two forensic laboratory facilities owned by the Nigeria Police (Ucha, 2010). There is also an acute shortage of forensic officers (Network of Police Reform in Nigeria, 2010). Although the Nigerian government has recently indicated its readiness to reform the police, which may include the provision of more forensic science facilities; there are so many unanswered but important questions concerning police utilisation of forensic science. For example, it is not known if the IPOs are ready enough to adapt to the new situation and subsequent organisational changes, should forensic facilities be made available to the police. Thus, what are the levels of personal adaptability traits among IPOs and what perception do they have

concerning forensic science application in criminal investigations? Are these variables related to one another? These were the questions which this study sought to answer.

The way a worker perceives the working facilities made available by an organisations may influence how the employee will react and utilize them, which could either be in favor of the goals of the organisations or otherwise. Generally, adaptability traits stimulate individuals to modify their thoughts and actions to suit a new situation, for example, when it happens in their workplace. Thus, possession of adaptability traits could likely make an employee to have a favorable perception of a new way of doing things in the organization. Related to the issue of IPOs and utilisation of forensic science in criminal investigation, it can be said that: officers with high level of adaptability traits are expected to have a positive perception of forensic science discipline and should be ready to accept and appropriately use them. Similarly, those with low scores of adaptability traits may likely have a less positive perception towards utilisation of forensic science. To test these assumptions, three common adaptability traits, that is, extraversion, agreeableness and methodicalness; and a perception scale were used, and the following null hypotheses were accordingly formulated:

H₀₁: there is no relationship between extraversion and perception of forensic science by the IPOs.

H₀₂: there is no relationship between agreeableness and perception of forensic science by the IPOs.

H₀₃: there is no relationship between methodicalness and perception of forensic science discipline by the IPOs.

LITERATURE REVIEW

Personality was traditionally seen by psychologists as a weak contributor in the prediction of job performance, however, recent development concerning some personality constructs, e.g. 'big five', has proven that personality types can be valid predictors of performance, even in the police organisation (Black, 2000). The big five personality traits are extraversion, agreeableness, conscientiousness, neuroticism, and openness (Schmitt, Allik, McCrae, & Benet-Martínez, 2007). Personality traits have been

studied and were found to have relationship with various aspects of workers in an organisations; for example, studies on shift-work complaints (Natvik *et al.*, 2011), job satisfaction and burnout (Grant and Langan-Fox, 2007; Levy and Lounsbury, 2011). Other studies suggested an association between unique personality types in police and mental health, stress, and trauma resistance (Galatzer-Levy *et al.*, 2011; Orr *et al.*, 2012). There were studies also on police perception of high crime areas (Ratcliffe & McCullagh, 2001), police pursuit and emergency response driving (Crundall, Chapman, Phelps & Underwood, 2003) and perception of unfair treatment (Dowler, 2005). However, little has been done to explore how personality traits are associated with the perception of forensic disciplines as they are used in criminal investigation.

Perception is the process by which people make sense of what other individuals and phenomenon are supposed to look like. It encompasses the construction of an understanding of the social world from the data obtained through senses (Michener, DeLamater & Myers, 2004). It can also be seen as the process through which people select, organize, and interpret sensory stimulations into meaningful information about their worlds; it is a psychological mechanism that enables individuals to understand their environment (Rao and Narayana, 1998). Rao and Narayana (1998) further argued that perception is the single most crucial determinant of human behavior, as there can be no behavior without perception. In other words, people perceive things based on certain information they gather and possibly act towards that thing based on the perception.

Adaptability, as an individual's attribute, can be seen as one's general ability to adjust to changes, or barriers (seeming or otherwise) in one's career (Rottinghaus, Day, & Borgen, 2005; Duffy, 2010). It is thus an ability, skill, disposition and willingness to change so as to fit different tasks, social, and environmental features (Ployhart & Bliese, 2006). Adaptability also involves a person being flexible to act either as dominant or friendly, depending on the situation (Paulhus & Martin, 1988); it connotes the ability to adjust to a new reporting structure within a team (Kozlowski, Gully, Nason & Smith, 1999). The traits in adaptability include extraversion, agreeableness, methodicalness, independence,

intellectual openness and industriousness (Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger & Gough, 2006)

Extraversion is an individual characteristic that encompasses behavior such as being sociable, talkative, assertive, active, energetic, cheerful, and socially confident (Oh, Lee, Ashton, & de Vries, 2011). Extraversion was found to be a predictor variable of performance across different contexts of businesses and employee performance, particularly in sales and services organizations (Hurtz & Donovan, 2000; LePine & Van Dyne, 2001). Notably, extraversion, as a moderator of the relationship between other personality traits and workplace outcomes; was shown to have strengthened the relationship between conscientiousness and overall job performance among women (Witt, 2002). More so, Rubin, Munz, and Bommer (2005) provided some evidence that extraversion reinforced positive effect of emotion recognition ability in predicting transformational leadership, which is the ability of a leader to encourage, inspire and motivate employees to innovate and create change that will help grow and shape the future success of the company; by its nature, transformational leadership favors adaptation and is therefore related to adaptability capacity of an employee. More so, extraversion was found to have demonstrated oppositional relationships in connection to workplace deviance (Oh, Lee, Ashton, & de Vries, 2011). For example, it was shown that the operational validity of extraversion for deviant behaviors was either low (Sackett, Berry, Wiemann, & Laczko, 2006) or near to zero (Salgado, 2002). This further supports the possibility of connection between extraversion and commitment of the employees to the organizational aims and objectives.

Agreeableness is one of the Big-five personality traits. Agreeable individuals are characterized as pleasant, tolerant, helpful, trusting, forgiving, considerate, and they tend to be cooperative (Bowling & Eschleman, 2010). Graziano and Eisenberg (1997) found that employees who scored high on agreeableness, were more likely to display less hostility and aggression toward others during work time. Mount, Ilies & Johnson (2006) found that agreeableness had a direct negative association with interpersonal destructive behaviors with job satisfaction moderately mediating the relationship. This finding was further supported by Berry et

al., (2007), and is in line with what Dalal (2005) and Salgado (2002) found in their meta-analysis results. Agreeableness is thus considered as an important personal motivational factor that strongly determines workplace behavior (Berry, Ones & Sackett, 2007).

Methodicalness portrays characteristics that are work-oriented, such as achievement, responsibility, and conscientiousness; which are largely non-personal and social. Indeed, Lee *et al.* (2005) found a negative correlation between conscientiousness and destructive deviance. Even though this dimension is work-oriented and non-personal, a significant correlation between conscientiousness and interpersonal deviance was also found in an earlier study (Liao, Joshi & Chuang, 2004). Various studies have shown negative relationships between conscientiousness and workplace behavior (see, for example, O'Neill, Lewis & Carswell, 2011; LePine, LePine & Jackson, 2004; Colbert, Mount, Harter, Witt & Barrick, 2004). Highly conscientious employees are more likely to put effort to achieve personally important goals, identify particular ways to achieve those goals, called optimisation, and when necessary, seek out alternate means to augment existing methods (compensation) (Bajor & Baltes, 2003; Wiese, Freund & Baltes, 2000), which as Bajor & Baltes (2003) argued could lead to better performance, and decreased work-family conflict (Baltes, Zhdanova & Clark, 2011).

METHOD

A sample survey method was used in this study. The location of the study was Zone 1 of the Nigeria Police. The Zone 1 is one of the twelve zonal police commands in Nigeria, comprising of zonal command and three state commands, that is, Kano, Jigawa and Katsina states. Based on the IPOs population of 3,503, a sample size of 347 was determined using Krejcie and Morgan's (1970) table of sample size estimation. A potential 20% dropout rate was added making the sample size 416. Systematic sampling was used to select the elements with IPOs lists as sampling frame. The inclusion criteria were, 1) An investigator has spent at least two years in service, 2) he or she should have been in the location of the study on a regular posting and not on special assignment, loan or operation and, 3) was also serving at the State or Zonal CIID in Zone 1 at the time of conducting the study.

Quantitative data were then collected via a self-administered questionnaire containing measures of adaptability: extraversion, agreeableness, and methodicalness (Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger & Gough, 2006). These scales were used by previous studies and were found to have high validity and reliability with Cronbach alpha values of between 0.69 to 0.87 (Bachelor, Meunier, Laverdiere, & Gamache, 2010; Thalmayer, Saucier & Eigenhuis, 2011). For this study, the domains were validated on the Nigeria police respondents and were found to have high validity and reliability for use in with Cronbach's alpha value of 0.86 (Agreeableness), 0.91 (Methodicalness) and 0.79 (Independence).

To determine the perception of the respondents regarding forensic science discipline, a perception scale was purposely developed by the current researchers; this is because the researchers could not find a scale that was earlier designed and used to specifically measure police perception regarding forensic science. This scale was also included in the self-administered battery. The initial number of items of the perception scale was 18, which were selected out of 55 pools of statements and questions. After undergoing validation and revalidation, four items, (representing reliability, intelligibility, compatibility and validity of forensic science) were retained for the construct with $\alpha = 0.77$. In addition to the perception and adaptability traits, information on sociodemographic characteristics of the participants was collected. At the end of the data collection, responses from 401 respondents were obtained and analyzed using SPSS version 24. The sample size exceeded the minimum size required.

RESULTS

The socio-demographic profiles of the participants

The sociodemographic characteristics of the respondents considered in this study were gender, age, marital status, education, and rank. The majority (87.3%) of the respondents were males while 12.7% were female; this is not surprising as the workforce of the Nigeria Police is dominated by males because females hardly join police (Sarki & Hussein, 2019). According to the Nigeria Police, there were 87.6% and 12.4% male and female police in

the agency respectively (NPF/UNWOMEN/UNFPA, 2010). Respondents with ages between 28 and 37 years constituted the highest percentage (37.2%) in relation to other categories of age. The category that follows in terms of frequency is the 38-47 category (34.4% of the respondents). Very few (9.7%) fall in the youngest category, the 18-27 years' category.

With regard to marital status, the majority (78.1%) of respondents were married, and several respondents were single. More than one-third (35.4%) of the respondents were Diploma holders; more than one-quarter of the respondents had secondary certificate (25.2%) or bachelor's degree/HND Certificate (28.7%). A small percentage of respondents have primary (4.0%) or postgraduate (7.0%) education. In relation to rank, the distribution of respondents was similar: Officers (32.9%), Inspectors (31.2%) and Men (35.9%). Although the percentage of the Men category is a little bit higher, this shows that the Criminal Investigation Intelligence Department comprised of IPOs of higher, middle and lower ranks almost equally.

Adaptability and perception scores of the respondents

The score distribution of personality traits and perception among the respondents is shown in Table 1. Extraversion ($M=14.84$, $SD=3.470$) was the most prevalent (59.1%) and highest trait among, the respondents who scored equal or above the mean. This was followed by Agreeableness ($M=14.97$, $SD=3.157$) and methodicalness ($M=14.56$, $SD=3.602$) with 56.4% and 54.1% respectively. See Table 1.

Table 1:
Adaptability traits of the respondents (n=383)

Adaptability traits	Scores			Respondents' levels of score (%)				
	Max	M	SD	Very low	Low	Normal	High	Very high
Extraversion	20	14.84	3.47	4.2	10	26.7	44.9	14.2
Agreeableness	25	17.7	3.06	13.2	26.2	36.9	21.4	-
Methodicalness	30	21.8	4.36	37.9	38.2	21.2	-	-

Moreover, as the table shows, the majority of the respondents have scored at least normal in extraversion, more than half scored normal and above in agreeableness, but none have scored above normal in methodicalness. This indicates that the two traits were common and high among the respondents, while methodicalness was also widespread but not in high proportion.

Table 2:
Perception of the respondents (n=383)

<i>Items</i>	Scores			Overall perception (%)	
	<i>M</i>	<i>M</i>	<i>SD</i>	<i>Good</i>	<i>Not so good</i>
	<i>ax</i>				
<i>Perception1</i>	5	3.79	1.29	66.6	32.7
<i>Perception2</i>	5	3.38	1.27	51.1	48.1
<i>Perception3</i>	5	3.55	1.18	55.6	42.9
<i>Perception4</i>	5	3.81	1.22	67.8	30.9
Perception	20	14.56	3.42	71.1	26.7

As presented in Table 2, the maximum score on the perception scale was 20, while the mean score of the respondents was 14.56 (SD=3.42). The majority of the respondents (71.1%) have scored equal or above the mean. Particularly, at least two-third (66.6%) have favorable perception concerning the reliability (perception1) and validity (67.8%), i.e. perception4, of forensic science, while more than half among the respondents have good perception of the intelligibility, that is perception2, (51.1%) and compatibility, perception3, (55.6%) of the forensic field. This suggests that a reasonable number of respondents have higher score regarding perception of forensic science in criminal investigation.

Hypotheses tests

In order to test the null hypotheses of the relationship between adaptability traits and perception, binomial logistics regression was calculated: perception been considered as dichotomous variable while the traits as ordinal. Preliminary analysis check conducted prior to the main

hypotheses' tests did not indicate any violation of the assumptions of binomial regression. Thus, all the correlations among the predictors were <0.80 , interactive terms were non-significant ($p>0.05$). The results showed that the regression model was significant, $\chi^2 (df = 3, N = 380) = 31.994, p = 0.000$, and adequate as confirmed by Hosmer and Lemeshow test, $\chi^2 (df = 8, N = 380) = 14.907, p = 0.061$. The variance explained by the model was 11.6% (Nagelkerke $R^2 = 0.116$) and the predictive accuracy was 74.7%.

Table 3:

Predictor coefficients for the model predicting the perception of forensic science (n = 383)

Variables	B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Extraversion	0.059	0.041	2.070	1	0.150	1.061	0.979	1.151
Agreeableness	0.118	0.046	6.721	1	0.010	1.125	1.029	1.230
Methodicalness	0.083	0.035	5.648	1	0.017	1.087	1.015	1.164
Constant	-2.799	0.704	15.828	1	0.000	0.061		

Among the three adaptability traits, agreeableness and methodicalness were statistically significant ($p < 0.05$) indicating a relationship with the dependent variable. As presented in Table 3, the likelihood of positive perception increases by 1.125 [95% CI, 1.029-1.230] when a score of agreeableness is increased; there are also odds for increase in perception by 1.087 [95% CI, 1.015-1.164] when a score in methodicalness is increased. Extraversion did not seem to show any statistical significance in the model. Therefore, the null hypotheses H_{02} and H_{03} are rejected, while the H_{01} is not rejected. In other words, perception was positively related to agreeableness and methodicalness but not related to extraversion.

DISCUSSION

The literature does not contain much knowledge regarding adaptability in relation to either police work or perception. Nonetheless, the researchers argue that this association is important because it will help in understanding which type of personality should be more suitable in the

police investigation department. This study found that two (agreeableness and methodicalness) of the three adaptability traits considered are associated with perception of forensic science in a positive way, suggesting that IPOs with high levels of these traits are likely to form positive perception of forensic science discipline in criminal investigations. This, in turn, may lead to cooperative behavior of accepting and adequately using forensic facilities as opined by Berry *et al.* (2007).

The finding related to agreeableness, is similar to Mount *et al.*'s (2006) who reported that being high in agreeableness may make individuals shun destructive behaviors that will affect the organization; it is also in line with Berry *et al.* (2007), Dalal (2005), Lee, Ashton & Shin (2005) and Salgado (2002). In the same vein, Black (2000), as well as Barrick & Mount (1991), have found that agreeableness, together with extraversion and conscientiousness, are important personality factors for police performance. In other words, the finding indicated that IPOs with high score of agreeableness are likely to embrace positive behavior that will improve the working of police organisation, i.e., positive perception towards forensic science disciplines.

In relation to methodicalness, the findings herein agreed with previous studies. In particular, Lee, Ashton & Shin's (2005) study evidencing a positive association between individuals with high methodicalness on one hand and work-oriented, look towards achievement and responsibility, on the other. See also Goldberg (1990) and Rothbart and Ahadi (1994). Thus, there is a likelihood that IPOs who are methodical, due to their work-oriented nature and zeal to achieve responsibility could have better perception of forensic disciplines, which are tools that help realize more reliable investigations. Notwithstanding the agreement with other studies, this study contrasted with Liao, Joshi & Chuang (2004) who had found significant correlation between methodicalness and interpersonal workplace deviance. Interpersonal workplace deviance, which is a minor but unhealthy behavior directed at co-workers, could indirectly affect how employees view their organization, that is, as either conducive for organizational goals achievement or not.

However, concerning extraversion, earlier research by Hurtz & Donovan (2000), LePine & Van Dyne, (2001) and Organ & Ryan (1995), provided some evidence that extraversion was positively correlated with job performance in the business-oriented organizations especially at sales and managerial positions. It was also found to have reinforced methodicalness in certain situations; see, for example, Witt (2002) and Rubin, Munz, & Bommer (2005). It is posited that the application of forensic science disciplines as part of the modern Nigerian policing may be further advanced because of this link between extraversion and perception, thereby improving crime investigation. Contrastingly, this study did not support those findings, as a non-significant relationship was discovered between perception and extraversion.

CONCLUSION AND RECOMMENDATION

Although there are many dimensions to understanding an individual's personality type and how they affect behaviour, not much has been done to explore the link between adaptability traits and perception. As is seen in this study, the duo traits of agreeableness and methodicalness, representing adaptability construct have positive relationships with police perception of forensic science discipline in criminal investigations. Police investigators who have a high score of these traits may likely be more receptive to police provision of forensic facilities and be ready to utilise them adequately, than their counterparts who have low scores. Consequently, it is recommended that consideration should be given to the type of personality police investigators have before they are posted to serve in the criminal investigations department, especially when forensic techniques are required to be used. This could be achieved through a well-designed personality test. Other factors, like frequency of forensic investigation training attendance of an IPO, work experience and education level may as well be considered in deciding who should be posted to the investigation department. One limitation of this study was the failure to control the effect of sociodemographic variables which may have compounded the relationship between the dependent and the independent variables; this paves way for future empirical research.

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REFERENCES

- Bachelor, A., Meunier, G., Laverdiere, O., & Gamache, D. (2010). Client attachment to therapist: Relation to client personality and symptomatology, and their contributions to the therapeutic alliance. *Psychotherapy: Theory, Research, Practice, Training*, 47(4), 454.
- Bajor, J. K., & Baltes, B. B. (2003). The relationship between selection optimization with compensation, conscientiousness, motivation, and performance. *Journal of Vocational Behavior*, 63(3), 347-367.
- Baltes, B. B., Zhdanova, L. S., & Clark, M. A. (2011). Examining the relationships between personality, coping strategies, and work-family conflict. *Journal of Business and Psychology*, 26(4), 517-530.
- Berry, C. M., Ones, D. S., & Sackett, P. R. (2007). Interpersonal deviance, organizational deviance, and their common correlates: A review and meta-analysis. *Journal of applied psychology*, 92(2), 410.
- Black, J. (2000). Personality testing and police selection: Utility of the 'Big Five'. *New Zealand Journal of Psychology*, 29(1), 2.
- Bowling, N. A. (2010). Effects of job satisfaction and conscientiousness on extra-role behaviors. *Journal of Business and Psychology*, 25(1), 119-130.
- Buch, M. N. (2013). The Police, Too, Have A Case. *Indian Express*.
- Cochran, J. K., Bromley, M. L., & Swando, M. J. (2002). Sheriff's deputies' receptivity to organizational change. *Policing: An international journal of police strategies & management*, 25(3), 507-529.

- Colbert, A. E., Mount, M. K., Harter, J. K., Witt, L. A., & Barrick, M. R. (2004). Interactive effects of personality and perceptions of the work situation on workplace deviance. *Journal of applied psychology, 89*(4), 599.
- Crundall, D., Chapman, P., Phelps, N., & Underwood, G. (2003). Eye movements and hazard perception in police pursuit and emergency response driving. *Journal of Experimental Psychology: Applied, 9*(3), 163.
- Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of applied psychology, 90*(6), 1241.
- De Vries, R. E., de Vries, A., & Feij, J. A. (2009). Sensation seeking, risk-taking, and the HEXACO model of personality. *Personality and Individual Differences, 47*(6), 536-540.
- Dowler, K. (2005). Job satisfaction, burnout, and perception of unfair treatment: The relationship between race and police work. *Police Quarterly, 8*(4), 476-489.
- Duffy, R. D. (2010). Sense of control and career adaptability among undergraduate students. *Journal of Career Assessment, 18*(4), 420-430.
- Ericson, R. V. (2005). The police as reproducers of order. *Policing: Key Readings, 215-246*.
- Eschleman, K. J., Bowling, N. A., & Alarcon, G. M. (2010). A meta-analytic examination of hardiness. *International Journal of Stress Management, 17*(4), 277.
- Galatzer-Levy, I. R., Madan, A., Neylan, T. C., Henn-Haase, C., & Marmar, C. R. (2011). Peritraumatic and trait dissociation differentiate police officers with resilient versus symptomatic trajectories of posttraumatic stress symptoms. *Journal of traumatic stress, 24*(5), 557-565.
- Goldberg, L. R. (1990). An alternative" description of personality": the big-five factor structure. *Journal of personality and social psychology, 59*(6), 1216.
- Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The international

- personality item pool and the future of public-domain personality measures. *Journal of Research in personality*, 40(1), 84-96.
- Grant, S., & Langan-Fox, J. (2007). Personality and the occupational stressor-strain relationship: The role of the Big Five. *Journal of Occupational Health Psychology*, 12(1), 20.
- Graziano, W. G., & Eisenberg, N. (1997). Agreeableness: A dimension of personality. In *Handbook of personality psychology* (pp. 795-824). Academic Press.
- Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of applied psychology*, 85(6), 869.
- Kozlowski, S. W., Gully, S. M., Nason, E. R., & Smith, E. M. (1999). Developing adaptive teams: A theory of compilation and performance across levels and time. *Pulakos (Eds.), The changing nature of work performance: Implications for staffing, personnel actions, and development*, 240, 292.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Lee, K., Ashton, M. C., & Shin, K. H. (2005). Personality correlates of workplace anti-social behavior. *Applied Psychology*, 54(1), 81-98.
- LePine, J. A., & Van Dyne, L. (2001). Voice and cooperative behavior as contrasting forms of contextual performance: evidence of differential relationships with big five personality characteristics and cognitive ability. *Journal of applied psychology*, 86(2), 326.
- LePine, J. A., LePine, M. A., & Jackson, C. L. (2004). Challenge and hindrance stress: relationships with exhaustion, motivation to learn, and learning performance. *Journal of applied psychology*, 89(5), 883.
- Levy, J. J., & Lounsbury, J. W. (2011). Big Five personality traits and performance anxiety in relation to marching arts satisfaction. *Work*, 40(3), 297-302.
- Liao, H., Joshi, A., & Chuang, A. (2004). Sticking out like a sore thumb: Employee dissimilarity and deviance at work. *Personnel Psychology*, 57(4), 969-1000.
- Michener, H., DeLamater, J., & Myers, D. (2004). Self-presentation and impression management. *Social psychology*, 5, 222-244.

- Moore, R. (2014). *Cybercrime: Investigating high-technology computer crime*. Routledge.
- Mount, M., Ilies, R., & Johnson, E. (2006). Relationship of personality traits and counterproductive work behaviors: The mediating effects of job satisfaction. *Personnel psychology*, 59(3), 591-622.
- National Population Commission. (2018). Nigeria's current estimated population. *nd*, online: *Government of Nigeria < population. gov. ng/>: Muslims make up, 50*.
- Natvik, S., Bjorvatn, B., Moen, B. E., Magerøy, N., Sivertsen, B., & Pallesen, S. (2011). Personality factors related to shift work tolerance in two-and three-shift workers. *Applied ergonomics*, 42(5), 719-724.
- Network on Police Reform in Nigeria (2010). *Criminal Force: Torture, Abuse, and Extrajudicial Killings by the Nigerian Police Force*. Open Society Institute.
- NPF/UNWOMEN/UNFPA (2010). A Gender Policy for the Nigeria Police Force. Nigeria Police Force, United Nations Entity for Gender Equality and the Empowerment of Women, and the United Nations Population Fund, Abuja.
- Nsiah-Gyabaah, K. (2010). Human security as a prerequisite for development. *Global environmental change and human security*, 237-259.
- O'Neill, T. A., Lewis, R. J., & Carswell, J. J. (2011). Employee personality, justice perceptions, and the prediction of workplace deviance. *Personality and individual differences*, 51(5), 595-600.
- Oh, I. S., Lee, K., Ashton, M. C., & de Vries, R. E. (2011). Are dishonest extraverts more harmful than dishonest introverts? The interaction effects of honesty-humility and extraversion in predicting workplace deviance. *Applied psychology*, 60(3), 496-516.
- Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel psychology*, 48(4), 775-802.
- Orr, S. P., Lasko, N. B., Macklin, M. L., Pineles, S. L., Chang, Y., & Pitman, R. K. (2012). Predicting post-trauma stress symptoms from pre-trauma psychophysiological reactivity, personality traits and

- measures of psychopathology. *Biology of mood & anxiety disorders*, 2(1), 8.
- Paulhus, D. L., & Martin, C. L. (1988). Functional flexibility: A new conception of interpersonal flexibility. *Journal of personality and social psychology*, 55(1), 88.
- Ployhart, R. E., & Bliese, P. D. (2006). Individual adaptability (I-ADAPT) theory: Conceptualizing the antecedents, consequences, and measurement of individual differences in adaptability. In *Understanding adaptability: A prerequisite for effective performance within complex environments* (pp. 3-39). Emerald Group Publishing Limited.
- Rao, V.S & Narayana, P.S. (1998). Organization Theory and Behavior, (Delhi: Konark Publishing Company)329-330.
- Raosoft, I. (2004). Sample size calculator. Available from: [www. raosoft com/samplesize](http://www.raosoft.com/samplesize).
- Rothbart, M. K., & Ahadi, S. A. (1994). Temperament and the development of personality. *Journal of abnormal psychology*, 103(1), 55.
- Rottinghaus, P. J., Day, S. X., & Borgen, F. H. (2005). The Career Futures Inventory: A measure of career-related adaptability and optimism. *Journal of Career Assessment*, 13(1), 3-24.
- Rubin, R. S., Munz, D. C., & Bommer, W. H. (2005). Leading from within: The effects of emotion recognition and personality on transformational leadership behavior. *Academy of Management Journal*, 48(5), 845-858.
- Sackett, P. R., Berry, C. M., Wiemann, S. A., & Laczó, R. M. (2006). Citizenship and counterproductive behavior: Clarifying relations between the two domains. *Human performance*, 19(4), 441-464.
- Salgado, J. F. (2002). The Big Five personality dimensions and counterproductive behaviors. *International journal of selection and assessment*, 10(1-2), 117-125.
- Sarki, Z. M., & Hussein, M. D. (2019). Factors Influencing the Choice of Police as Prospective Career among Students of Criminology and Security Studies in Nigeria. *Journal of Administrative Science*, 16(1), 51-60.

- Schmitt, D. P., Allik, J., McCrae, R. R., & Benet-Martínez, V. (2007). The geographic distribution of Big Five personality traits: Patterns and profiles of human self-description across 56 nations. *Journal of cross-cultural psychology, 38*(2), 173-212.
- Taylor, R. W., Fritsch, E. J., & Liederbach, J. (2014). *Digital crime and digital terrorism*. Prentice Hall Press.
- Thalmayer, A. G., Saucier, G., & Eigenhuis, A. (2011). Comparative validity of brief to medium-length Big Five and Big Six Personality Questionnaires. *Psychological assessment, 23*(4), 995.
- Ucha, C. (2010). Poverty in Nigeria: Some dimensions and contributing factors. *Global Majority E-Journal, 1*(1), 46-56.
- Wiese, B. S., Freund, A. M., & Baltes, P. B. (2000). Selection, optimization, and compensation: An action-related approach to work and partnership. *Journal of Vocational Behavior, 57*(3), 273-300.
- Witt, L. A. (2002). The interactive effects of extraversion and conscientiousness on performance. *Journal of Management, 28*(6), 835-851.
- Witt, L. A., & Carlson, D. S. (2006). The work-family interface and job performance: moderating effects of conscientiousness and perceived organizational support. *Journal of occupational health psychology, 11*(4), 343.

ABOUT THE AUTHORS

Zakariyya Muhammad Sarki holds B.Sc. and M.Sc. in Sociology from Bayero University Kano, Nigeria. He is currently a Ph.D. research fellow at the School of Health Sciences, Universiti Sains Malaysia, researching forensic science and policing. He lectures at the Federal University Dutse, Jigawa State, Nigeria. His research interests include Criminology; Criminal Investigation; Forensic Science. **Geshina Ayu Mat Saat**, Ph.D. is an Associate Professor and obtained BHsc in Psychology from International Islamic Universiti Malaysia, M.Sc. in Applied Criminology from University of Leicester, UK, and a Ph.D. in Criminology from Loughborough University, UK. She lectures at the Universiti Sains Malaysia in the Forensic Science Programme. She has produced and published seven books, over 40 research articles, and 80 media-related materials.