

Influence of Big Five Personality Traits on Work Performance Among Non-Academic Staff of Selected Public Polytechnics in Benue State-Nigeria

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Abstract

This study examined the influence of Big Five personality traits on work performance among non-academic staff of selected public polytechnics in Benue State, Nigeria. The study adopted a cross-sectional survey design. The population comprised 472 non-academic staff from Federal Polytechnic, Wannune; Akperan Orshi Polytechnic, Yandev; and Benue State Polytechnic, Ugbokolo. A sample of 216 respondents was selected using stratified random sampling. Data were collected using the 44-item Big Five Inventory (BFI-44) and the Individual Work Performance Questionnaire. Descriptive statistics were used to summarize respondents' characteristics, while simple linear regression and standard multiple regression were employed to test the hypotheses at the 0.05 level of significance. The findings revealed that the composite measure of the Big Five personality traits significantly and positively predicted work performance ($R = .620$, $R^2 = .384$, $F(1, 214) = 133.50$, $p < .001$), explaining 38.4% of the variance in work performance. Furthermore, the five personality traits jointly significantly predicted work performance ($R = .700$, $R^2 = .490$, $F(5, 210) = 40.35$, $p < .001$), accounting for 49.0% of the variance. Conscientiousness emerged as the strongest positive predictor ($\beta = .420$, $p < .001$), followed by extraversion ($\beta = .180$, $p = .010$) and openness to experience ($\beta = .140$, $p = .031$). Neuroticism had a significant negative influence ($\beta = -.160$, $p = .029$), whereas agreeableness did not make a statistically significant independent contribution ($\beta = .090$, $p = .133$). The study concludes that personality characteristics are important predictors of work performance among non-academic staff. It recommends that polytechnic management consider relevant personality characteristics, particularly conscientiousness, alongside qualifications and experience in staff recruitment, placement, training, and performance development.

Original Research Article

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Introduction

Work performance is a central concern in organizations because it directly impacts their success. It can be defined as the transformation of efforts into productivity aimed at achieving specific results, often evaluated in terms of economy, efficiency, and effectiveness (Meyer, 2002). In the organizational context, it refers to the extent to which an employee contributes to achieving organizational goals (Rafik and Shuib, 2005). Various scholars have emphasized that performance encompasses both the goals and methods of achieving them (Ibrahim, 2004), and is often measured objectively by results achieved (Al-Edaily, 2005).

Employee performance is about how individuals contribute to and achieve within an organization, covering work quality and effectiveness. It impacts productivity, profit, and morale,

making it crucial for success (Utin & Sri, 2019). It involves achieving work goals, showing meaningful engagement, and having supportive colleagues and employers (Karakas, 2010).

Performance has two parts: the actions taken (behavioral engagement) and the results achieved (expected outcome) (Mallick et al., 2014; Campbell, 2014). Behavior refers to actions towards accomplishing work, while outcome is the consequence of those actions. Both are connected but distinct, as outcomes depend on motivation and cognitive abilities (Borman & Motowidlo, 2013).

Task performance involves explicit job behaviors, requiring cognitive ability, task knowledge, skills, and habits (Edeh et al., 2024). It's a contractual agreement between managers and subordinates, broken into technical administrative and

leadership tasks. To boost performance, employers should understand employee needs and offer incentives like financial rewards (salaries, bonuses) and non-financial benefits (promotion, training, housing) (Kim, 2014). Regular assessment and development opportunities also play a key role (Utin & Sri, 2019).

Research is necessary to identify the factors influencing employee performance, such as motivation, competence, and compensation. Employees are the most important component in a company, carrying out production and distribution processes. They require encouragement and motivation from managers or colleagues to work effectively. Motivation is a crucial factor in employee performance, serving as an incentive for employees to excel. Managers must provide motivation alongside other managerial factors, acting as leaders, friends, and motivators for their employees. Employee performance measures the role of human resources in a company's progress. Clear human resource management is necessary to achieve company goals, adjusting mutual interests through company policies. However, employee performance improves when individuals are self-aware and sincere in carrying out their duties (Perçin, 2020).

Performance refers to the quality and quantity of work achieved by an employee while carrying out assigned responsibilities (Gupron, 2020). Employee performance can be enhanced by developing employees' potential and competencies in line with their work requirements. High employee performance enables organizations to achieve their goals effectively, while employees remain vital assets in carrying out organizational processes and achieving objectives (Ojogbo, 2018). Therefore, assessing employees based on specific criteria is essential for optimizing their performance.

Employee performance refers to the level of success employees achieve in performing their duties and responsibilities (Rachmaliya & Effendy, 2017). Understanding and evaluating employee performance is important for organizations seeking to improve workforce effectiveness and achieve their objectives. Research has shown that personality traits play a significant role in determining work performance. The Big Five personality traits, comprising openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism, have been consistently associated with work performance across different countries and professions (Barrick & Mount, 2015; Judge, 2012; Hogan & Holland, 2013). Although these relationships have been widely documented in the United States, Europe, and South Africa, limited attention has been given to employees of Small and Medium-scale Enterprises (SMEs) in Gboko Metropolis. This gap provides the motivation for the present study.

Statement of the problem

The influence of Big Five personality traits on work performance among employees of selected public

polytechnics in Benue State, Nigeria, is a topic of significant interest. Various studies and meta-analyses have shown that Big Five personality dimensions are related to work performance (Barrick & Mount, 2015; Hough, Eaton, Dunnett, Kamp & McCloy, 2009; Salgado, 2007; Tett, Jackson, Burnett & Rothstein, 2003; Vinchur, Schippmann, Sweizer & Roh, 2008). Specifically, conscientiousness has been found to be one of the best predictors of work performance in the United States of America, Europe, and South Africa (Barrick & Mount, 2015; Salgado, 2007). Similarly, extraversion and conscientiousness have been found to predict work performance in various occupations in Thailand (Vinchur et al., 2008).

However, most of these studies have been carried out in Western countries, and there is a world of difference when it comes to the Nigerian context, particularly among employees of public polytechnics in Benue State. The cultural, social, and environmental factors that influence personality traits and work performance in Nigeria may be distinct from those in Western countries. Moreover, the existing studies have largely focused on selected public polytechnics in Benue State, Nigeria, leaving a gap in knowledge about the influence of Big Five personality traits on work performance among employees of public polytechnics in Benue State-Nigeria.

Management of people is a complex task, and it is made even more challenging by the fact that individuals differ in their personal characteristics, social background, cognitive abilities, intelligence, and personality traits. These factors can influence employee behavior at the workplace, leading to variations in work performance, job satisfaction, and motivation. Some employees may exhibit positive work performance behaviors, while others may display negative behaviors, and it is not entirely clear why this is the case. The Big Five personality traits which are: openness, conscientiousness, extraversion, agreeableness, and neuroticism provide a useful framework for understanding individual differences in personality. However, more research is needed to explore the influence of these traits on work performance in the Nigerian context, particularly among employees of public polytechnics. This study aims to fill this knowledge gap and provide insights into the role of Big Five personality traits in shaping work performance among non-academic staff of selected public polytechnics in Benue state-Nigeria.

In light of the above, this study seeks to explore the Big Five personality traits in selected public polytechnics in Benue State, Nigeria, and examine their influence on performance outcomes in the selected polytechnic. By investigating the relationship between Big Five personality traits and work performance, this study hopes to contribute to the development of effective strategies for improving employee performance and organizational outcomes in Nigeria.

Objective of the study

The study main objective is to investigate the Influence of Big

Five Personality Traits on Work Performance Among Non-Academic Staff of Selected Public Polytechnics in Benue State-Nigeria to fill the vacuum.

The specific Objectives are:

1. To examine the influence of each Big Five personality trait openness, conscientiousness, extraversion, agreeableness, and neuroticism on work performance among non-academic staff of selected public polytechnics in Benue State, Nigeria.
2. To determine which of the Big Five personality traits is the strongest predictor of work performance among non-academic staff of selected public polytechnics in Benue State, Nigeria.

Research Hypotheses

The study tests the following hypotheses:

1. **H₀₁:** There is no significant influence of the Big Five personality traits on work performance among non-academic staff of selected public polytechnics in Benue State, Nigeria.
2. **H₀₂:** Openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism do not independently and jointly significantly influence work performance among non-academic staff of selected public polytechnics in Benue State, Nigeria.

Literature Review

Conceptual Review

Big five personality traits

Personality traits are enduring characteristics or qualities that influence a person's behavior across different situations.

The big five personality traits are the most widely accepted model of personality. The big five personality traits are:

a. Agreeableness

Agreeableness is a personality trait characterized by kindness, cooperation, and politeness (Bono & Judge, 2024). Individuals with high agreeableness tend to be sympathetic, flexible, trusting, and tolerant (Barrick, Mitchell, & Stewart, 2003). They're often popular, friendly, and helpful, valuing harmony in relationships (Wewellyn & Wislson, 2003; Williamson, 2017).

The trait encompasses aspects like trust, altruism, compliance, and modesty, ranging from "Adapter" (high agreeableness) to "Challenger" (low agreeableness) (Mullins, 1996). Adapters are suited to roles in teaching and social work, while Challengers excel in advertising and leadership. High agreeableness is linked to straightforwardness, sympathy, and cooperation, whereas low agreeableness is associated with quarrelsome and unfeeling behavior (Mullins, 1996).

Agreeableness is also defined by traits like helpfulness,

nurturance, and emotional support, contrasting with hostility and self-interest (Digman, 1990). It involves being polite, flexible, and open-minded, with a tendency to be generous and sincere (Barrack & Mount, 1991; Judge & Bono, 2000). In the workplace, agreeable employees foster positive interactions, offer constructive responses, and promote teamwork, leading to effective work behaviors (Barrack & Mount, 1991).

Research suggests agreeableness is linked to social support and job performance (Bakker et al., 2006; Erdahim et al., 2006). Agreeable employees are cooperative, follow rules, and act courteously, contributing to productive behavior and efficiency (Erdahim et al., 2006).

b. Neuroticism

Neuroticism is a personality trait characterized by the tendency to experience frequent and intense negative emotions in response to stress (Barlow et al., 2014). It's often associated with unpleasant emotions like anxiety, depression, anger, irritability, sadness, worry, and fear. Individuals with high neuroticism traits tend to respond poorly to environmental stress, feel threatened, and may become overwhelmed by minor frustrations (Widger & Oltmanns, 2017).

Also known as "negative affectivity," neuroticism refers to a disposition to experience negative emotional states, feel distressed, and view the world negatively (Louisburg et al., 2007). In an organizational setting, neurotic individuals might play devil's advocates, pointing out problems with proposed courses of action. Managers with high neuroticism traits may often feel angry, dissatisfied, and complain about lack of progress.

High neuroticism scores are linked to being easily anxious, temperamental, self-pitying, emotional, and vulnerable to stress-related disorders. On the other hand, individuals with low neuroticism scores tend to be calm, tempered, and complacent (Feist & Feist, 2006). The negative nature of neuroticism means individuals experience more negative life events, which can impact job satisfaction. High neuroticism can reduce job satisfaction levels (Heller et al., 2002).

In the workplace, neuroticism can manifest in various ways, influencing how employees interact with colleagues and respond to challenges. Understanding neuroticism can help organizations develop strategies to support employees and improve overall well-being.

c. Conscientiousness

Conscientiousness is a personality trait that encompasses characteristics like being organized, goal-oriented, and responsible. Individuals with high conscientiousness are often described as diligent, attentive, and hardworking, with a strong emphasis on achievement and self-

discipline (Barrick, Mount & Judge, 2001; Costa & McCrae, 1992). They're the ones who are punctual, fussy about details, and driven to meet their goals.

Traits associated with conscientiousness include competence, order, dutifulness, achievement, self-discipline, and deliberation (Costa & McCrae, 1992). "Focused" individuals (high conscientiousness) are often leaders, senior executives, or high achievers, while "flexible" individuals (low conscientiousness) might excel in roles like research or management consulting.

Conscientious employees tend to be more motivated, satisfied with their jobs, and perform better (Judge et al., 2002; Ivancevich et al., 2008). They're more likely to take initiative, work towards goals, and experience a sense of psychological attachment to their work (Li, Lin & Chen, 2007). High conscientiousness is linked to being logical, reliable, and risk-averse (Goldberg, 1990). On the flip side, individuals with low conscientiousness might be seen as lazy, inefficient, or disorganized. They might struggle with goal-setting and experience less job satisfaction (Judge et al., 2002).

In the workplace, conscientiousness is highly valued, as it drives employees to be more productive, efficient, and committed to their work (Daft, 2008). Conscientious employees are often the ones who lead to significant job performance improvements (Barrick et al., 2001; Judge et al., 2002).

d. Openness to Experience

Openness to experience is a personality trait that involves being receptive to new ideas, experiences, and perspectives. Individuals with high openness tend to be liberal-minded, curious, and imaginative, with a desire to explore and expand their experiences (Nadkarni & Hermann, 2010; Feist & Feist, 2006). They're often characterized as mature, practical, and efficient in their abilities (Douglas, 2012). Openness to experience encompasses traits like fantasy, aesthetics, feelings, actions, ideas, and values (Costa & McCrae, 1992). Those with high openness are often creative, open-minded, and intellectual, with a tendency to question established norms and explore new possibilities (Griffins & Hackett, 2004). They're likely to be entrepreneurs, architects, or artists, and are often drawn to roles that involve innovation and creativity (Buchanan & Huczynski, 2004).

In the workplace, high openness employees tend to be more efficient, productive, and effective, as they're constantly seeking new methods and approaches to complete tasks (Louisburg et al., 2007). They're more likely to achieve greater efficiency at work, pursue opportunities to learn, and deal with ambiguous situations (Stewart & Nandkeolyar, 2006). High openness individuals tend to be task-based, searching for

new ways to complete work, and are more likely to aspire to higher positions in the organizational hierarchy (De Jong, Velde & Jansen, 2011). They're good at adapting to unfamiliar environments and show better performance in such situations (Bing & Louisburg, 2000).

On the other hand, individuals with low openness tend to be more traditional, practical, and less open to new ideas. They might excel in roles like finance management, project management, or applied sciences (Buchanan & Huczynski, 2004).

e. Extraversion

Extraversion is a personality trait that involves being outgoing, sociable, and seeking social attention (Wilt & Revelle, 2017). It's characterized by traits like warmth, gregariousness, assertiveness, and excitement-seeking (Costa & McCrae, 1992). Individuals high in extraversion tend to be fearless, dominant, and bold, with a desire for interpersonal connection (Carter, Miller & Widiger, 2012).

Extraverts are often described as gregarious, warm, and positive, while introverts tend to be quiet, reserved, and shy (Costa & McCrae, 1992). Extraverts are spontaneous, communicative, energetic, and enthusiastic, with a tendency to seek admiration and social acknowledgement (Goldberg, 1990; Watson & Clark, 1997).

In the workplace, extraversion is linked to emotional commitment and job satisfaction (Erdheim, Wang & Zickar, 2006; Connolly & Viswesvaran, 2000). Extraverts tend to be effective in roles like administration, social relations, and sales, using their optimistic and aggressive manner to respond to customer requests (Judge et al., 2002). High extraversion is associated with providing services ahead of time, making better use of competencies, and increased self-efficacy and confidence (Varca, 2004; Berry & Feij, 2003). Extraverts tend to be optimistic, confident, and dominant, with a sanguine temperament that focuses on positive experiences (Bakker et al., 2006).

Extraversion relates to comfort in relationships, with extraverts enjoying social interactions and introverts preferring quieter environments. Overall, extraversion is linked to positive emotions, optimism, and a tendency to approach challenges with confidence.

In terms of work performance, extraversion can be beneficial in roles that involve social interaction, leadership, or creative tasks. However, it's not necessarily a guarantee of success, and introverts can excel in roles that play to their strengths.

Work performance

Work performance is a major concern in every organization.

It is a major concern because; the success of an organization depends on work performance. Hence, work performance has emerged as an important variable in organization research and has drawn the attention of industrial organizational psychologist and management scientists over the years.

Work Performance — Work performance can be described as the transformation of employees efforts into useful output. In an organizational context, this means the degree to which employees contribute toward realizing organizational goals (Rafik & Shuib, 2005). Employee performance underlies organizational processes, especially in regard to efficiency and productivity (Masa'deh et al., 2018). It focuses on the end product alone but also recognizes the effort of employees in different stages of attaining organizational goals. So, employee performance is a manifestation of whether an employee succeeds in doing the assigned work (Gunawan, 2017).

Employee performance is defined as the output or success of an employee in a particular timeframe and with respect to the agreed upon working standards, target, or criterion (Gunawan, 2017). They are one of the metrics that relate employee engagement, financial and other achievements to an organization (Anitha, 2014). Employee performance is determined by the competencies and skills of employees, along with supervision support and willingness to exert effort in their work (Masa'deh et al., 2018).

Employee performance is defined as the Extent to which an Employee add value by performing his or her duties (Rachmaliya & Effendy, 2017). Without it, organizations cannot achieve their goals so motivating and ensuring efficient performance on the part of employees are fundamental to organizations. According to Abualoush et al. Employee performance refers to the quality and efficiency with which employees perform their work tasks and duties (Fletcher & Bailey, 2018). It is the measure of how well an employee can do tasks in a manner aligned to achieving goals and objectives of organization. An organizational success strongly relies on the contributions and involvements due to employees of organizational context especially in supportive environments (Abualoush et al., 2018). According to Roopavathi and Kishore (2021), employee performance is another term for productivity, attendance, work attitude, employees' contributions towards achieving organizational goals; it reflects the overall contribution of an employee in favour of both [28].

Empirical review

Joseph (2019) studied the impact of Big Five personality traits on job performance behavior among breweries and food and beverage manufacturing companies in Nigeria. This research is conducted to examine primary and secondary data on openness to experience, conscientiousness, extraversion, agreeableness, neuroticism/emotional stability from 352 respondents were selected through Taro Yamane's formula. Two hypotheses were tested using ANOVA, and the results

showed that Big Five personality traits significantly affected job performance behaviours positively or negatively. The research recommended organizations promote job performance behaviours and review employee characteristics on a periodical basis to assess if they are appropriate for the job assigned. Using 100 respondents and SPSS version 23.0, Didi (2017) also found the Big Five personality traits have an effect on job performance in Surabaya. The results indicated that the predictors (extraversion, agreeableness, conscientiousness, neuroticism and openness to experience) were significantly positively related to job performance of which extraversion was the most influential.

However, other studies like Barrick and Mount (1991) found conscientiousness to be a stronger predictor across occupations. Cultural or contextual factors in Surabaya might be at play.

Research suggests that certain personality traits are linked to work performance. Conscientious individuals are often organized, goal-oriented, and disciplined, with high performance goals (Foulkrod et al.,). Extraverts are expressive, outgoing, and sociable, thriving on communication and social recognition, which suits them for roles like sales and administration (Costa & McCrae, 1992). Their positive emotions contribute to job satisfaction and strong performance (Erdheim et al., 2006).

In contrast, neuroticism is associated with intense negative emotions, anxiety, and depression, leading to poor responses to stress (Barlow et al., 2014). Neurotic individuals may struggle with mood swings and emotional instability (Weijen, 2010).

Agreeableness involves being kind, cooperative, and gentle, but its link to job performance is weak (Barrick & Mount, 2005). Openness influences performance in specific contexts, like skill acquisition, but doesn't consistently predict overall work outcomes (Mount, 2015). These traits impact job efficiency differently: conscientiousness and extraversion are often linked to better performance, while neuroticism can hinder it. Agreeableness and openness have more nuanced effects, depending on the context.

Research Design

This study employed a cross-sectional survey design. This method was considered suitable for the study because it enabled the researcher to sample a large number of participants and collect data from them through a questionnaire. It also enabled the researcher to make inferences about the respondents' level of work performance and the extent to which it was influenced by personality traits.

Setting

The setting of the study was the non-academic staff of selected public polytechnics in Benue State, Nigeria. The study focused on employees who were not involved in teaching or academic roles, such as administrative staff,

technicians, and other support personnel working in public polytechnics within Benue State.

Population

The population of the study consisted of non-academic staff from three selected public polytechnics in Benue State, Nigeria. The institutions were:

1. Federal Polytechnic, Wannune – 243 employees
2. Akperan Orshi Polytechnic, Yandev – 111 employees
3. Benue State Polytechnic, Ugbokolo – 118 employees

The total population was 472 non-academic staff members.

The selection technique employed was the stratified random sample. The population was stratified into three strata based on the selected polytechnics. Next, participants were chosen from each stratum using simple random selection. This method ensured that all employees had an equal possibility of being included in the study.

The sample size was determined using Taro Yamane's formula, which resulted in a sample size of 216 employees.

Instruments

Data were collected by a standardised questionnaire consisting of two scales. The questionnaire comprised the 44-item Big Five Inventory (BFI-44) established by John, Donahue and Kentle (1991) and the Individual Work Performance Questionnaire (IWPQ) developed by Koopmans (2014). The tools measured the Big Five personality traits and work performance, respectively.

Techniques for Data Analysis

Descriptive statistics of frequency, percentage, mean and standard deviation were employed to analyse the biodata of the respondents. The first hypothesis was tested using simple linear regression analysis and the second hypothesis was tested using standard multiple regression analysis. The hypotheses were tested at 0.05 level of significance.

Results of Hypotheses Testing

Hypothesis One

H₀₁: There is no significant influence of the Big Five personality traits on work performance among non-academic staff of selected public polytechnics in Benue State, Nigeria.

To test this hypothesis, simple linear regression analysis was conducted to determine whether the composite measure of the Big Five personality traits significantly predicts work performance among the respondents.

Table 1: Simple Linear Regression Analysis of Big Five Personality Traits and Work Performance

Variable	R	R ²	df	F	Sig	β	t	Sig
Constant	.620	.384	1,214	133.50	.000		11.55	.001
Big Five personality traits						.620	37.98	.000

Dependent Variable: Work Performance

The result in Table 1 shows that the Big Five personality traits had a substantial positive relationship with work performance among non-academic staff of the selected public polytechnics in Benue State. The correlation coefficient ($R = .620$) indicates a positive relationship between the Big Five personality traits and work performance. The coefficient of determination ($R^2 = .384$) indicates that the Big Five personality traits jointly accounted for approximately 38.4% of the variance in work performance, while the remaining 61.6% could be attributed to other factors not included in the model. The ANOVA result further indicates that the regression model was statistically significant ($F(1, 214) = 133.50, p < .001$). Since the obtained significance value is less than the 0.05 level of significance, the null hypothesis is rejected. Therefore, the study concludes that the Big Five personality traits have a significant influence on work

performance among non-academic staff of selected public polytechnics in Benue State, Nigeria.

Hypothesis Two

H₀₂: Openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism do not independently and jointly significantly influence work performance among non-academic staff of selected public polytechnics in Benue State, Nigeria.

To test this hypothesis, standard multiple regression analysis was conducted to determine the joint and independent contributions of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism to work performance.

Table 2: Multiple Regression Analysis of the Big Five Personality Traits on Work Performance

Variable	R	R ²	df	F	B	t	Sig
Constant	.700	.490	5,210	40.35		8.45	.000
Openness to Experience					.140	2.17	.031
Conscientiousness					.420	5.75	.000
Extraversion					.180	2.59	.010

Agreeableness					.090	1.51	.133
Neuroticism					-.160	-2.20	.029

Dependent Variable: Work Performance

The result in Table 2 indicates that the five personality traits jointly predicted work performance among non-academic staff of the selected public polytechnics in Benue State. The multiple correlation coefficient ($R = .700$) indicates a strong positive relationship between the combined Big Five personality traits and work performance. The coefficient of determination ($R^2 = .490$) indicates that the five personality traits jointly explained 49.0% of the variance in work performance among the respondents. The adjusted R^2 of .478 indicates that, after adjustment for the number of predictors in the model, approximately 47.8% of the variation in work performance was explained by the five personality traits. The ANOVA result shows that the overall regression model was statistically significant ($F(5, 210) = 40.35, p < .001$). This indicates that the five personality traits, when considered jointly, significantly predict work performance. Therefore, the null hypothesis that the five traits do not jointly significantly influence work performance is rejected. With respect to their independent contributions, conscientiousness was the strongest significant predictor of work performance ($\beta = .420, p < .001$). This was followed by extraversion ($\beta = .180, p = .010$), neuroticism ($\beta = -.160, p = .029$) and openness to experience ($\beta = .140, p = .031$). Agreeableness ($\beta = .090, p = .133$) did not make a statistically significant independent contribution to work performance at the 0.05 level. The negative beta coefficient for neuroticism indicates that higher levels of neuroticism were associated with lower work performance when the other personality traits were statistically controlled. In contrast, openness to experience, conscientiousness, and extraversion showed positive relationships with work performance.

Overall, the findings suggest that conscientiousness is the strongest individual predictor of work performance, while the five personality traits collectively make a significant contribution to explaining differences in work performance among non-academic staff of the selected public polytechnics in Benue State, Nigeria.

Since the overall regression model was significant ($p < .001$), the null hypothesis is rejected. It is therefore concluded that openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism jointly significantly influence work performance among non-academic staff of selected public polytechnics in Benue State, Nigeria.

However, when considered independently, openness to experience, conscientiousness, extraversion, and neuroticism significantly predicted work performance, whereas agreeableness did not make a statistically significant independent contribution at the 0.05 level.

Discussion of Findings

The first hypothesis examined whether Big Five personality traits significantly influence work performance among non-academic staff of selected public polytechnics in Benue State, Nigeria. The simple linear regression result showed a significant positive influence, with $R = .620, R^2 = .384, F(1, 214) = 133.50, p < .001$. Thus, the Big Five personality traits explained 38.4% of the variation in work performance, leading to the rejection of the null hypothesis. The finding indicates that personality characteristics are important factors associated with employees' effectiveness in carrying out their responsibilities.

This finding agrees with Barrick and Mount (1991), whose meta-analysis established that personality traits, particularly conscientiousness, are related to job performance across different occupational groups. Similarly, Tett, Jackson, and Rothstein (1991) found meaningful relationships between personality characteristics and job performance, noting that the strength of these relationships depends partly on the nature of the job and performance criteria. The finding is also consistent with Salgado (1997), who reported that personality traits, particularly conscientiousness and emotional stability, predict job performance across occupational groups. More recently, Zell et al. (2022), based on a synthesis of more than 50 meta-analyses, found robust associations between the Big Five traits and performance, with conscientiousness showing the strongest overall relationship.

The present finding suggests that the influence of personality is relevant to the polytechnic environment, where non-academic staff require responsibility, adaptability, interpersonal skills, cooperation, and emotional stability. However, the 38.4% explained variance also indicates that personality is not the sole determinant of work performance. Other factors, including motivation, leadership, job satisfaction, training, workload, remuneration, and organizational climate, may account for the remaining variation.

The second hypothesis examined the independent and joint influence of openness, conscientiousness, extraversion, agreeableness, and neuroticism on work performance. The multiple regression result showed that the five traits jointly significantly predicted work performance ($R = .700, R^2 = .490, F(5, 210) = 40.35, p < .001$). Thus, they jointly explained 49.0% of the variance in work performance. Independently, conscientiousness was the strongest predictor ($\beta = .420, t = 5.75, p < .001$), followed by extraversion ($\beta = .180, t = 2.59, p = .010$) and openness to experience ($\beta = .140, t = 2.17, p = .031$). Neuroticism had a significant negative influence ($\beta = -.160, t = -2.20, p = .029$), while agreeableness was not significant ($\beta = .090, t = 1.51, p = .133$).

The dominance of conscientiousness agrees with Barrick and Mount (1991) and Salgado (1997), who identified conscientiousness as a consistent predictor of job performance. The positive influence of extraversion is consistent with Barrick and Mount's finding that extraversion is particularly relevant in jobs involving interpersonal interaction. The negative influence of neuroticism also agrees with Zell et al. (2022), who reported a negative association between neuroticism and performance. The non-significant effect of agreeableness is consistent with findings that its predictive validity is less consistent across occupations (Barrick & Mount, 1991; Salgado, 1997).

Conclusion

The study investigated the impact of Big Five personality traits on the work performance of non-academic personnel at several chosen public polytechnics in Benue State, Nigeria. The results suggest that personality traits play a major role in explaining differences in work performance among individuals. The first hypothesis indicated that the Big Five personality traits had a strong favourable influence on work performance ($R^2 = 0.384$). This is evidence that personality traits of employees are important to the effectiveness of their performance of duties and contribution to organisational goals.

The study also revealed that openness to experience, conscientiousness, extraversion, agreeableness and neuroticism jointly and significantly impact work performance. The five personality traits explained 49.0% of the variance in work performance. But they helped in different ways. Conscientiousness was the best positive predictor of work performance, suggesting that individuals who are responsible, organised, disciplined, dependable, and achievement-oriented tend to be more productive at work.

Extraversion and openness to experience also made significant positive contributions to work performance. This suggests that sociability, confidence, adaptability, creativity, and willingness to accept new ideas can enhance employees' effectiveness in the workplace. In contrast, neuroticism had a significant negative influence, indicating that emotional instability, anxiety, worry, and vulnerability to stress may reduce employees' ability to maintain effective work performance.

Although agreeableness showed a positive relationship with work performance, it did not make a statistically significant independent contribution when the other personality traits were controlled. This suggests that cooperation and interpersonal harmony alone may not sufficiently predict overall work performance among non-academic staff.

Recommendations

Based on the findings, the study provide all following recommendations:

1. Management of the selected public polytechnics should consider personality characteristics, particularly conscientiousness, alongside educational qualifications, professional competence, and experience when recruiting and placing non-academic staff.
2. The management of the polytechnics should organize regular staff development programmes focusing on self-discipline, time management, responsibility, adaptability, communication, teamwork, and emotional regulation. Such programmes can help employees translate positive personality characteristics into effective workplace behaviours and improve overall work performance.
3. The management should provide supportive working environments that help employees manage workplace stress. Staff counselling, supportive supervision, reasonable workloads, effective communication, and mechanisms for addressing workplace concerns should be strengthened to reduce the negative effects of emotional instability and excessive workplace stress.
4. Employees should be encouraged to contribute ideas, participate in committees and professional development activities, and adopt improved methods of performing administrative and technical tasks.
5. Polytechnics management should therefore complement personality-related interventions with appropriate remuneration, adequate working resources, effective supervision, promotion opportunities, training, recognition, fair performance appraisal, and conducive working conditions. Personality should not be used as the sole basis for judging employee performance.

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