Emotional intelligence and fraud tendency: a survey of future accountants in Nigeria

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Abstract

Purpose – This study examines the association between emotional intelligence (EI) and the tendency of future accountants to rationalize and engage in occupational fraud.

Design/methodology/approach – The study adopts a survey methodology and uses a questionnaire containing a fraud scenario and EI construct to gather data from 225 participants. It performed a Cronbach alpha to assess the measurement parameters consistency of EI and fraud tendency and employed Pearson correlation and regression analysis to test its hypothesis.

Findings – The study found that future accountants in Nigeria are emotionally intelligent and have a high fraud tendency. Also, it found a significant and positive association between EI and fraud tendency, suggesting that future accountants that are emotionally intelligent have a higher tendency to rationalize and engage in occupational fraud. In addition, the study found that academic intelligence, a control variable, positively associates with fraud tendency.

Practical implications – The study offers rare insights into the fraud tendency of future accountants, which would benefit the counter fraud community in Nigeria and other developing countries. Recruiters and employers will find the study beneficial in decision-making on job recruitment, placements and moral orientation for prospective accountant employees.

Originality/value – The study is the first to directly associate EI with the fraud tendency of future accountants from a developing country with high fraud profile and underdeveloped counter fraud strategy. Thus, it provides a benchmark for future studies in other developing countries.

Keywords Emotional intelligence, Fraud tendency, Occupational fraud, Future accountants, Nigeria

Paper type Research paper

1. Introduction

Fraud is unpleasant and causes great harm, especially occupational fraud. It impacts the quality of life of individuals, organizations and the public (Association of Certified Fraud Examiners [ACFE], 2020; Albrecht *et al.*, 2019). At its highest level, occupational fraud consists of three primary categories: asset misappropriation, financial statement fraud and corruption (ACFE, 2020). It remains a leading threat to the growth and survival of businesses, and it permeates into public and private organizations, causing economic uneasiness in developed and developing countries, as over $3.3 bn is lost to occupational fraud annually (ACFE, 2020; Central Intelligence Agency [CIA], 2017; Nanda *et al.*, 2019). A survey of 125 countries by the ACFE in 2020 confirms the rise and threat posed by occupational fraud to the global economy and security (ACFE, 2020), and amid these rising fraud incidences, accountants are accused of being enablers of occupational fraud (Adekoya *et al.*, 2020; Matthews and Gandel, 2015; Oboh *et al.*, 2020; Oboh and Omolehinwa, 2022; Rezaee and Riley,

2010; Sikka and Lehman, 2015). Critical accounting scholars (e.g. Bakre, 2007; Griffin, 2015; Oboh, 2019; Sikka, 2009; Sikka, 2017; Uche, 2002) allege that accountants use their expertise to aid the management and directors of companies to deliberately alter their financial statements to evade taxes, siphon money and manipulate share prices. The Enron scandal is a classic case that depicts accountants as accomplices of occupational fraud with management and directors of companies, especially financial statement fraud, to meet market expectations and impress investors (Ajekwe and Ibiamke, 2017; Albrecht *et al.*, 2019; Nanda *et al.*, 2019; Rezaee, 2005; Rezaee and Riley, 2010). Recent fraud cases of Volkswagen, Toshiba, Nissan and other multinational companies involving accountants are shreds of evidence necessitating research response and counter fraud interventions (Gaspar *et al.*, 2021; Oboh, 2019; Oboh and Omolehinwa, 2022).

In response to the problem of fraud, practitioners and academics have created many explanations as to what conditions stir up the tendency and enable individuals to commit fraud, some of which have had a considerable influence on the counter fraud community (Marks, 2019; Vousinas, 2019; Wells, 2017). The most influential explanation is the fraud triangle, developed from the work of Cressey (1953). The fraud triangle suggests that an act of occupational fraud occurs when an individual under pressure, caused by a non-shareable financial problem, has the opportunity to engage in fraud and manages to justify committing an act of fraud to themselves – a process labeled rationalization (Cressey, 1953; Wells, 2017), and this fraud model has been considerably influential on the counter fraud community, which subsequently has focused almost all of its counter fraud recommendations upon reducing opportunity, and to a much smaller extent pressure, rather than rationalization. Rationalization in the fraud triangle is the catalyst, internal to individuals, which determines the occurrence of fraud despite external pressure and opportunity. It aligns with the behavioral tendencies of individuals, and we learned from Ajzen's (1991) theory of planned behavior (TPB) and Ajzen and Fishbein's (2005) theory of reasoned action (TRA) that the actions of an individual are guided, and his behavior is predicted based on his behavioral tendency or intention. Ajzen (1991) suggests that an individual's attitude, which is a makeup of his/her emotions, values and beliefs, is an intrinsic factor that leads to the formation of a tendency or an intention towards a behavior. Previous literature on behavioral psychology and moral development signals that fraud tendency is an internal behavioral proclivity that interrelates with the emotions, ethics, values, moral development and beliefs of individuals (Ajzen and Fishbein, 2005; Awang *et al.*, 2019; Gaspar *et al.*, 2021; Ismail, 2015; Ismail and Rasheed, 2019; Kohlberg, 1973; Rest, 1979; Jones, 1991). Thus, reflecting on Ajzen's (1991) TPB and inferences from Ajzen and Fishbein (2005) and previous literature, it is expected that the tendency to rationalize and engage in occupational fraud may be contingent on an individual's emotional intelligence (EI), a possibility this study seeks to explore.

In time past, renowned scholars (e.g. Angelidis and Ibrahim, 2011; Dulewicz and Higgs, 2005; Gransberry, 2022; Gómez-Leal *et al.*, 2022; Ismail and Rasheed, 2019; Law *et al.*, 2008; Lone and Lone, 2018; Schlaegel *et al.*, 2022) explored a diverse range of EI-related issues (e.g. effective leadership, moral judgment, job performance and satisfaction and ethical decision-making [EDM], among others). But an association between EI and the tendency of future accountants to rationalize and engage in occupational fraud appears not to have been considered in previous studies. And whether EI plays a role in predicting occupational fraud in organizations is a question the counter fraud community needs to consider to update their counter fraud interventions and recommendations. Though empirical research associating EI with fraud tendency is limited and prior results vary (Gaspar *et al.*, 2021; Ismail and Rasheed, 2019; Keefer *et al.*, 2018; Rahmatullah *et al.*, 2018; Yang *et al.*, 2018), Ismail (2015) suggests EI associates with the cognitive processes of individuals in different decision-making situations, and as an intrinsic behavioral disposition, EI signposts the meta-level ability of individuals to handle emotions and use them in ways that lead to positive outcomes (Goleman, 1998; Ismail,

2015; van Rooy and Viswesvaran, 2004). Therefore, it is expected that EI may associate with fraud tendency (Ismail and Rasheed, 2019; Sulastri and Kasanah, 2021), presupposing that a high EI will lead to a low fraud tendency. Thus, hypothesizing an association between EI and fraud tendency will contribute new information to existing fraud literature, which would interest the counter fraud community and fraud investigators.

Reflecting on the limitations of previous research and the call for counter fraud interventions, this study examines the association between EI and fraud tendency, aiming to add new information to existing literature and make up for the limited research on fraud tendency. Thus, the study makes three contributions to the current literature. First, the study adds to the literature on the direct association between EI and the tendency of future accountants to rationalize and engage in occupational fraud, which appears to be among the first to do so. Therefore, fraud theorists and the counter fraud community would find the study beneficial in recommending counter fraud interventions that may curb occupational fraud. Second, focusing on future accountants in Nigeria as a case study adds some uniqueness to empirical evidence regarding the developing world. Whereas most studies on occupational fraud are from developed countries and are limited to external factors focusing on managers, directors and other employees of companies, the current study explores a direct relationship between EI and the fraud tendency of future accountants from a developing country, making its finding a significant contribution to the literature. Besides, Nigeria represents developing countries with high corruption profiles (Bakre, 2007; Oboh, 2019; The Central Bank of Nigeria (CBN), 2017; The Nigeria Inter-Bank Settlement System (NIBSS), 2020; Transparency International, 2020). Therefore, the evidence in this study would serve as a benchmark for future research in other developing countries with similar fraud profiles. In addition, the study offers rare insights into the fraud tendency of future accountants, which recruiters, employers and human resource managers would find useful in making decisions relating to job recruitment, placements and moral orientation for prospective accountant employees. Lastly, this study combines two stages (moral judgment and moral intention) of Rest's (1979) EDM model and applies Cressey's (1953) fraud triangle to create a scenario and scale to measure fraud tendency. Future researchers can adopt the scenario and scale to measure EI and fraud tendency as the scenario reflects a real-life fraud situation mostly found in developing countries with high-fraud profiles.

The other parts of the study include the literature review, theoretical framework and hypothesis development on EI and the fraud tendency. The methodology adopted is then described, followed by a presentation and discussion of the results. Lastly, the conclusions, implications, limitations and suggestions for future research are discussed.

2. Literature review and hypothesis development
Fraud is any act proscribed by law as fraudulent, including but not limited to cheating, false representations and abuse of power (The United Kingdom Fraud Act, 2006; The Nigerian Criminal Code Act, 2004; United Nations Development Programme, 2017). It is a range of crimes involving dishonest acts and means that human ingenuity invents, which is resorted to by one individual, to get an advantage over another (Albrecht *et al.*, 2019; Doig, 2012; Rufus *et al.*, 2015). Among the different categories of fraud (e.g. person-to-person fraud, Internet and identity fraud), occupational fraud is one of the costliest forms of financial crime (ACFE, 2020). It is fraud against an organization that can be carried out by any individual who is a member of the organization, whether they are ordinary employees or directors (Ratmono and Frendy, 2022). It has three mutually exclusive categories: asset misappropriation, financial statement fraud and corruption (ACFE, 2020; Holtfreter, 2005; Nanda *et al.*, 2019). And following the Enron and Andersen scandal in 2002 and subsequent cases of occupational fraud, accountants have come under stern criticisms of being enablers of occupational fraud, accused of using their expertise and intelligence to aid the management and directors of

companies to alter their financial statements (Bakre, 2007; Griffin, 2015; Oboh and Omolehinwa, 2022; Rezaee and Riley, 2010; Sikka, 2017). Responding to the problem of fraud, academics and experts rely on models to explain the reason individuals rationalize and engage in occupational fraud; of which, four models dominate the literature and three (fraud scale, fraud diamond and fraud pentagon) of which are variants of the oldest and most referenced model – the fraud triangle (Wells, 2017; Vousinas, 2019; Dorminey et al., 2012). The triangle model, created from Cressey's (1953) research, suggests an act of fraud occurs when an individual under pressure caused by a non-shareable financial problem has the opportunity to engage in fraud and rationalizes committing an act of fraud to themselves (Albrecht et al., 2019; Andon et al., 2015; Awang and Ismail, 2018; Cressey, 1953; Wells, 2017). In principle, pressure and opportunity are external stimuli of fraud, while rationalization is the internal catalyst that makes fraud happen. Thus, it is all important for the counter fraud community to look beyond external factors like pressure, opportunity and ethical climates and consider intrinsic influences such as values, beliefs, emotions and ideologies that may predict the fraud tendency or rationalization behaviors of individuals.

In linking Cressey's (1953) fraud triangle to Ajzen's (1991) TPB, this study considers pressure and opportunity as the external forces that excite individuals to form an intention to commit occupational fraud, which rationalization causes to materialize (Albrecht et al., 2019; Baucus, 1994; Cressey, 1953; Wells, 2017), and relying on the arguments of prior moral and behavioral studies, it is logical to note that the fraud tendency of an individual is the crossing point of his/her moral judgment and moral intention that leads him/her to rationalize and engage in occupational fraud (Armstrong et al., 2003; Cressey, 1953; Marks, 2019; Rest, 1979; Schwartz, 2016; Wood et al., 2021). By implication, fraud tendency is more or less contingent on the extent to which an individual rationalizes and excuses fraud by integrating dubious cognitions into his moral judgment and intention (see Ajzen, 1991; Dewi and Anisykurlillah, 2021; Forsyth, 1980; Kohlberg, 1973; Marks, 2012), which explains the reason not everyone exposed to the same pressure and opportunity ends up committing fraud. Thus, fraud tendency is the behavioral proclivity in individuals that makes them rationalize fraud allures, leading to fraudulent behavior, which previous research suggests may be contingent on the attitudes, beliefs, values, ideologies and emotions of individuals (Ajzen, 2012; Ajzen and Fishbein, 2005; Ajzen and Madden, 1986; Forsyth, 1980; Gaspar et al., 2021; Ismail and Rasheed, 2019; Kohlberg, 1973; Rahmatullah et al., 2018; Rest, 1979).

Considering the possible tie between an individual's behavioral tendencies and emotions, beliefs and values suggested by Ajzen (1991) and Ajzen and Fishbein (2005), the current study explores whether EI associates with fraud tendency, which may be a plausible behavioral intervention strategy to help the counter fraud community reduce fraud rationalization. Though empirical studies on EI and fraud tendency are scarce (Ismail and Rasheed, 2019; Keefer et al., 2018; Yang et al., 2018), previous research on EI and cognitive processes (Ismail, 2015), EI and moral judgment (Ismail and Rasheed, 2019; Sulastri and Kasanah, 2021) and EI and deception (Gaspar et al., 2021) provides considerable evidence to expect an association between EI and fraud tendency, and while the concept of EI is not new, Ismail (2015) notes that EI is a behavioral temperament that signposts the meta-level ability of individuals to handle emotions and use them in decision-making. It has five components, namely self-awareness (being in touch with one's feelings and using the knowledge to make guided decisions), self-regulation (the ability to redirect disruptive moods to achieve goals), motivation (the drive to achieve impactful results), empathy (understanding and caring for the emotions of others) and social skill (building teams and managing relationships), all put together guide the thinking, actions and behaviors of individuals (Goleman, 1998; Ismail, 2015; Mesmer-Magnus et al., 2010; van Rooy and Viswesvaran, 2004). Evidence from renowned scholars and psychologists also suggests that EI is associated with diverse behavioral tendencies and dispositions. For example, Mandell and Pherwani (2003) and

Bradbury and Graves (2005) reported an association between EI and effective leadership. Angelidis and Ibrahim (2011), Deshpande and Joseph (2009) and Mesmer-Magnus *et al.* (2010) found that EI impacts ethical decision-making, while others reported an influence of EI on job performance (Dulewicz and Higgs, 2005; Law *et al.*, 2008) and job commitment and satisfaction (Sy *et al.*, 2006; Wong and Law, 2002). But despite the extensive research on EI in the business domain, very little research has been undertaken to associate EI with individual morality, and none on its association with the tendency to rationalize and engage in occupational fraud (Gaspar *et al.*, 2021; Ismail, 2015).

The few available studies on EI and morality suggest that EI goes beyond individual morality and could predict the tendency of individuals to rationalize and engage in occupation fraud. For example, Ismail (2015), Ismail and Rasheed (2019) and Sulastri and Kasanah (2021) examined and found an association between EI and moral judgment. They suggest that the ability to manage the emotions of self and others is critical to making moral judgments, which is closely linked to moral intention and moral behavior in Rest's (1979) EDM model, suggesting a possibility of EI influencing an individual's decision whether or not to engage in occupational fraud. In associating emotional quotient (EQ) with the tendency of local government officers in Indonesia to commit fraud, Rahmatullah *et al.* (2018) suggest EQ or EI influences fraud tendency negatively, indicating that fraud tendency is lower in individuals with high EQ. But recent research by Gaspar *et al.* (2021) provides a theoretical model and propositions on the association between EI and deception (characterized as fraud tendency), and in sharp contrast to Rahmatullah *et al.* (2018), Gaspar *et al.* (2021) conclude that emotionally intelligent individuals are the most likely to deceive, presupposing that individuals with high EI have a higher tendency to rationalize, commit and conceal a fraud.

In theory, three possible outcomes on the association between EI and fraud tendency may be observed, which are (1) a positive; (2) a negative and (3) a no association. But reflecting on Rahmatullah *et al.* (2018) and Gaspar *et al.* (2021), there are reasons to agree with both studies that EI could either lower or heighten fraud tendency in individuals. Going with the argument of Rahmatullah *et al.* (2018), with a high level of self-regulation, empathy and social skills, emotionally intelligent individuals are compassionate and considerate of others. They can control the tendency to commit fraud, considering the aftermath of the victims. In accordance with Goleman (1998), emotionally intelligent individuals can understand and regulate their emotions irrespective of any situational pressures and may likely abstain from fraud as an alternative to solving their financial problems. But considering Gaspar *et al.*'s (2021) argument, it would require EI to motivate and override one's emotions (or guilty feelings) to rationalize, engage in and conceal fraud. Besides, Wolfe and Hermanson (2004) and Marks (2019) argued individually that fraud perpetrators possess the capability and competence to diagnose, navigate and exploit fraud opportunities, and one such capability is the ability to be sturdy emotionally as to rationalize and override any guilty feelings of committing fraud. Referencing Marks' (2019) fraud pentagon model, a negative association is expected between EI and fraud tendency because, with the inclusion of arrogance in the pentagon model, Marks (2019) equates arrogance with hard conscience and greed, suggesting fraud perpetrators are possibly lacking in EI which makes them disregard the feelings of their victims. Thus, the current study assumes that individuals who are low in EI are egoistic and self-centered, having little or no empathy for the victims of fraud, not minding whether it may lead to the loss of a victim's life. But emotionally intelligent individuals may consider the emotions of others and put their interests first, desisting from fraud than hurting the feelings of others (Dewi and Anisykurlillah, 2021; Marks, 2019). Though previous literature suggests mixed possibilities on the association between EI and fraud tendency, the dearth of empirical research on fraud tendency and rationalization behaviors demands a critical response, especially given the rising occurrences of occupational fraud involving accountants, managers and directors of companies (Nanda *et al.*, 2019; Rezaee and Riley, 2010; Sikka, 2017;

Sikka and Lehman, 2015). While Gaspar *et al.* (2021) suggest a positive association between EI and fraud tendency, the current study expects a negative association in line with Marks' (2019) fraud pentagon model and the submissions of Rahmatullah *et al.* (2018), Ismail and Rasheed (2019) and Sulastri and Kasanah (2021). Thus, based on the suggestions of previous studies and the earlier theoretical discussion linking Ajzen's (1991) TPB with existing fraud models, the current study intends to contribute to the body of fraud literature by hypothesizing that *EI and fraud tendency are negatively associated,* suggesting that a high EI will lead to a low fraud tendency.

3. Research methods and data
3.1 Study design, population and sample size
This study adopts a survey strategy and uses a self-completed questionnaire to obtain primary data from the participants. The population consists of 493 registered final-year accounting students from three southwest Nigerian universities, made up of 210 students from the University of Lagos (UNILAG), representing federal universities, 220 students from the Lagos State University (LASU), representing state universities and 63 students from Afe Babalola University Ado-Ekiti (ABUAD), representing private universities, all sourced from the accounting departments of the respective universities. The study uses Yamane's (1967) sample formula to determine the sample size as 335 participants who are future accountants. The sample was drawn from the population using a random sampling design after grouping the participants into three strata according to their universities. Kothari and Garg (2014) note that random sampling is preferred to other techniques because it gives each individual equal chances to represent the population. It guarantees the Law of Statistical Regularity, which states that "if on an average the sample chosen is a random one, the sample will have the same composition and characteristics as the universe" (Kothari and Garg, 2014, p. 56).

3.2 Questionnaire design, validation and administration
The questionnaire design followed the suggestions of Oppenheim (1992) and Kothari and Garg (2014) on quality formatting, wording and question sequencing to enhance its validity and reliability and to limit social desirability and common-method biases. Face and content validities were certified by two associate chartered accountants and lecturers from two Nigerian universities. The study conducted a pilot test and used the feedback to revise the questionnaire before distribution. It also performed a Cronbach alpha (α) reliability test to assess the consistency of the composition parameter of the multiple-item scales used to measure the dependent (fraud tendency) and independent (EI) variables (Field, 2017) and how well each component measures the variables. Due to the coronavirus pandemic (COVID-19), the questionnaire was administered via an official online survey platform, the Joint Information Systems Committee (JISC) Online Survey Platform, recommended by the institution where the study was conducted. Besides, technological advances have made Internet-based surveys popular due to the wide range of benefits they offer, as they are cost-efficient, time-efficient, participant-friendly and quick to analyze compared to conventional methods. The JISC platform was secured and each participant required a password to access the survey within 14 days (July 23–August 6, 2021).

3.3 The measurement of variables
In testing its hypothesis, this study divides the measurement of variables into three categories, operationally defined as dependent, independent and control variables. First, the dependent variable, fraud tendency, is measured using a scenario that reflects a real-life fraud situation commonly found in developing countries with high-fraud profiles (See Appendix 1),

and based on Ajzen's (1991) TPB, which states that the behaviors of individuals are guided and predicted based on their intentions, this study assumes the moral motivation of an individual reflects his\her behavioral tendency toward fraud (Ajzen, 1991; Kohlberg, 1973; Rest, 1982; Stone et al., 2009). The study holds that individuals who rationalize and justify a deceitful act based on surrounding situations or utilitarianism would engage in the same act when faced with similar situations or if they feel the end would justify the means (Ajzen and Fishbein, 2005; Cressey, 1953; Jones, 1991; Kohlberg, 1973; Marks, 2012, 2019; Wells, 2017). Accordingly, after the scenario, the participants were asked to respond to a construct containing four statements on two stages (moral judgment and moral intention) of Rest's (1979) EDM model on a five-point Likert scale (strongly agree – 5 to strongly disagree –1). The responses obtained from the four statements were aggregated and averaged into a single variable – fraud tendency.

Second, EI, the independent variable, is measured using Goleman's emotional intelligence questionnaire (EIQ), obtained from the National Health Service (NHS) leadership toolkit. The EIQ has 10 questionnaire items for each component of EI (self-awareness, self-regulation, motivation, empathy and social skill), amounting to 50 items used to measure EI as a single variable (see Appendix 1). Alexander and Becker (1978) and Weber (1992) noted that adopting previously validated measurement scales facilitates comparisons and cross-validation of results. Lastly, in an attempt to address any omitted variables-related issues (Wooldridge, 2016), this study employs a set of control variables, namely gender, academic intelligence, religion and income, that may impact individual behavioral tendencies and moral dispositions, chosen with reference to previous behavioral studies (Ajzen, 1991; Ajzen and Fishbein, 2005; Craft, 2013; Kohlberg, 1973; Lehnert et al., 2015; Oboh, 2019; Oboh and Omolehinwa, 2022). For example, Ajzen and Fishbein (2005) identified a wide variety of personal and situational factors, such as gender (male and female), age (young and old), education (educated and uneducated), and economic status (rich and poor), that may be influencing individual behavioral beliefs about a given behavior, leading to the formation of an intention or tendency towards the behavior.

To avoid or limit any potential common-method bias, as suggested by Change et al. (2010) and Podsakoff et al. (2003), the dependent and independent variables were measured using different measurement styles, and the order of questions was mixed. Also, the participants were asked to answer as honestly as possible, as there were no right or wrong answers, and were assured of the anonymity and confidentiality of the survey via a cover letter that had the official logo and address of the institution where the study was conducted.

3.4 Model specification
The study developed the following regression model to test its hypothesis and provide evidence that would explain the proposed association between EI and fraud tendency:

$$FT_i = \beta_0 + \beta_1 EI_i + \beta_2 GEN_i + \beta_3 AI_i + \beta_4 REL_i + \beta_5 INC_i + \varepsilon_i$$

where FT is fraud tendency, EI is emotional intelligence, GEN is gender, AI is academic intelligence (measured by the current cumulative grade point average (CGPA) of the participants), REL is religion and INC is Income.

3.5 Data analysis methods
The data collected for analysis were checked for completeness, and there was no need to remove any responses. The sample size is adequate, with at least 15 cases per predictor (see Field, 2017). As Field (2017) suggests, the study used scatterplots of standardized predicted values vs standardized residuals to assess assumptions of normality, linearity and

homoscedasticity. The variance inflation factor (VIF) showed no multicollinearity, and the Durbin–Watson test showed that errors were independent, meaning the regression model is free from autocorrelation. The study performed descriptive statistical analysis to assess the participants' demographic composition, EI and fraud tendency. It considers a mean score of ≥3 on a five-point Likert scale as high/agreement and <3 as low/disagreement. Also, the study performed Pearson correlation and regression analyses to test its hypothesis and establish an association between EI and fraud tendency.

3.5 Ethical considerations

Adherence to ethical regulations helps preserve the integrity of the research community. These regulations are principles researchers must observe to ensure that sensitive data in research are protected. Accordingly, this study obtained ethical approval to collect data after satisfying the guidelines of the institution where it was conducted. Every material from secondary sources is used with permission, or due acknowledgment has been given to the author(s), and to limit the bias of social desirability, demand characteristics and common-method variance, the participants were duly informed in a cover letter of the purpose of the study (academics) and that participation was voluntary. They were assured of the privacy of their responses as the questionnaire contained no identification mark and that by accepting to complete the survey, they were consenting to the use of their data in the research, but could retract their data if required.

4. Results

4.1 Preliminary analysis

The survey instrument was administered via an official online platform (JISC) to minimize the spread of COVID-19. Therefore, within the access period (14 days), 225 participants completed the questionnaire, the number of observations made within the period (see Table 1). The response rate (67%), on average, is considered adequate to achieve the study's objectives.

The alpha coefficients for the dependent and independent variables, presented in Table 2, are considered satisfactory as they certify that the questionnaire and measurement scales are reliable, stable and consistent (see Field, 2017; Peterson, 1994). Moreso, Nunnally (1978) and Prasongsukarn (2009) note that an alpha coefficient ranges between 0 and 1, and the closer to 1, the greater the scale's reliability.

The demographic composition of the participants is displayed in Table 3, which shows that female participants (66.7%) are more than male participants (33.3%), indicating a gender in-balance. The vast majority are aged 21-< 25 years. They are mostly Christians (74.7%) and Moslems (23.6%), the two dominant religions in Nigeria. About two-thirds (61.3%) are on first-class and second-class upper cumulative grade point average (CGPA), and their income levels varied, with the majority receiving above ₦20,000 (approximately $46.11, at ₦433.72 = $1, as at 06/10/2022) as monthly upkeep/income.

Institution	Population	Sample (N/(1 + Ne^2))	Responses/Observations	Percentage
University of Lagos	210	138	125	91
Lagos State University	220	142	56	39
Afe Babalola University	63	55	44	80
Total	493	335	225	67
Source(s): Author's computation (2023) from SPSS version 25				

Table 1.
Sample size determination and questionnaire response rate

Measures	Questionnaire items	Alpha (α)
Fraud tendency (FT)	4	0.90
Emotional intelligence (EI)	50	0.93
Sub-components:		
Self-awareness	10	0.74
Self-regulation	10	0.68
Motivation	10	0.81
Empathy	10	0.77
Social skill	10	0.80

Note(s): Number of observations = 225
Source(s): Author's computation (2023) from SPSS version 25

Table 2.
Reliability test: fraud tendency (Cronbach alpha)

Variables		Frequency (%)
Gender	Male	75 (33.3)
	Female	150 (66.7)
Age Bracket	Below 21 years	33 (14.7)
	21-< 25 years	173 (76.9)
	25–30 years	19 (8.4)
Religion	Christianity	168 (74.7)
	Islam	53 (23.6)
	Traditionalist	1 (0.4)
	Atheist	1 (0.4)
	Others	2 (0.9)
Cumulative Grade Point Average (CGPA)	1.50–2.49	17 (7.6)
	2.50–3.49	70 (31.1)
	3.50–4.49	115 (51.1)
	4.50–5.00	23 (10.2)
Monthly Upkeep/Income	Less than ₦5,000/month	20 (8.9)
	₦5,000 -<₦10,000/month	40 (17.8)
	₦10,000 - ₦20,000/month	67 (29.8)
	Above ₦20,000/month	98 (43.6)

Note(s): Number of observations (N) = 225
Source(s): Author's computation (2023) from SPSS version 25

Table 3.
Participants demography

4.2 Descriptive analysis

As stated in the previous section, a mean score of ≥ 3 is considered high/agreement, while <3 is low/disagreement. Accordingly, Table 4 indicates that the participants have a high tendency to rationalize and engage in occupational fraud (combined: mean = 3.49), as they rationalized and justified the fraud in the scenario. Equally, the participants display a high level of EI (combined: mean = 3.78).

4.3 Pearson correlation analysis

As displayed in Table 5, the results of the Pearson correlation did not support the hypothesis of the study. The results indicate that EI correlates positively with fraud tendency ($p < 0.01$), as against a negative association hypothesized. Among the control variables, academic intelligence correlated positively with fraud tendency ($p < 0.01$), but no significant correlation was found between gender, religion, income and fraud tendency ($p > 0.05$).

	Mean	Standard deviation	Sum statistic	Min. statistic	Max. statistic
Dependent var.: Fraud tendency (FT) (combined)	*3.49*	*1.092*	*785*	*1.00*	*5.00*
Q1: Akin Peters is not altogether wrong in his decision since it is to advance himself in life	3.43	1.277	772	1.00	5.00
Q2: Occasionally, it is not totally wrong to make such decisions to achieve greater heights in life	3.48	1.236	782	1.00	5.00
Q3: Akin Peters' successes justify the decision he made	3.51	1.177	790	1.00	5.00
Q4: If I were Akin Peters, I would make the same decision to achieve greater heights in life	3.53	1.282	795	1.00	5.00
Independent var.: Emotional intelligence (EI) (combined)	*3.78*	*0.440*	*852.38*	*2.40*	*5.00*
Self-awareness	4.05	0.454	910.80	2.70	5.00
Self-regulation	3.57	0.533	804.30	2.00	5.00
Motivation	3.68	0.589	829.10	1.70	5.00
Empathy	3.87	0.487	870.20	2.30	5.00
Social skill	3.77	0.576	847.50	1.30	5.00

Table 4.
Descriptive analysis: fraud tendency and emotional intelligence

Note(s): Number of observations = 225
Source(s): Author's computation (2023) from SPSS version 25

		FT	EI	GEN	AI	REL	INC
FT	Pearson correlation	1					
	Sig. (2-tailed)						
	N	225					
EI	Pearson correlation	0.330**	1				
	Sig. (2-tailed)	0.000					
	N	225	225				
GEN	Pearson correlation	0.071	0.112	1			
	Sig. (2-tailed)	0.291	0.093				
	N	225	225	225			
AI	Pearson correlation	0.181**	0.001	−0.037	1		
	Sig. (2-tailed)	0.006	0.984	0.581			
	N	225	225	225	225		
REL	Pearson correlation	−0.025	−0.024	0.112	−0.091	1	
	Sig. (2-tailed)	0.714	0.723	0.095	0.175		
	N	225	225	225	225	225	
INC	Pearson correlation	0.015	0.082	−0.029	0.109	−0.025	1
	Sig. (2-tailed)	0.827	0.218	0.667	0.102	0.708	
	N	225	225	225	225	225	225

Table 5.
Pearson correlation matrix

Note(s): **. Correlation is significant at the 0.01 level (2-tailed). *Number of observations = 225*
Source(s): Author's computation (2023) from SPSS version 25

4.4 Regression analysis

Consequent to the data exploration results and diagnostics tests (See Appendix 2), the study performed a multiple linear regression analysis to establish an association between EI and fraud tendency. Field (2017) suggests linear regression is appropriate when the

research goal is prediction or explanation. In addition, four control variables (gender, academic intelligence, religion and income) are included in the regression model to control the variability between EI and fraud tendency and enhance the internal validity. The result, reported in Table 6 with a total number of observations of 225 independent responses, indicates that EI and fraud tendency are positively associated ($\beta = 0.328$, $p < 0.01$). This result does not support the study's hypothesis since it hypothesized a negative relationship between these two variables. Among the control variables, academic intelligence associates with fraud tendency positively, which is significant at 0.01 ($\beta = 0.185$, $p < 0.01$), while gender, religion and income did not significantly associate with fraud tendency ($p > 0.05$). The model statistically accounts for about 13% (Adj. R^2) variation in fraud tendency (F = 7.393, $p < 0.01$) as the t-test confirms that EI ($t = 5.192$, $p < 0.01$) and academic intelligence ($t = 2.932$, $p < 0.01$) made significant contributions in predicting the variation in fraud tendency, with EI contributing more than academic intelligence. The results of the diagnostic tests (average VIF = 1.023 and Durbin–Watson = 2.000) certified that the model is free from multicollinearity and auto-correlation problems.

In sum, based on the statistical evidence from the correlation (see Table 5) and regression (see Table 6) analyses, the study found statistical evidence that supports an association between EI and fraud tendency. But contrary to the negative '*a priori*' expectation, the finding demonstrates that EI and fraud tendency are positively associated. In addition, the study found that academic intelligence, a control variable included in the regression model, positively associates with fraud tendency.

Model summary

Model	R	R square	Adjusted R square	Std. Error of the estimate	Durbin–Watson
1	0.380	0.144	0.125	1.02163	2.000

ANOVA

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	38.579	5	7.716	7.393**	0.000
	Residual	228.575	219	1.044		
	Total	267.154	224			

Coefficients

Model		Unstandardized coefficients B	Std. Error	Standardized coefficients Beta	t	Sig	Collinearity statistics Tolerance	VIF
1	(Constant)	−0.229	0.859		−0.267	0.790		
	EI	0.814	0.157	0.328**	5.192**	0.000	0.979	1.022
	GEN	0.093	0.147	0.040	0.636	0.525	0.973	1.028
	AI	0.264	0.090	0.185**	2.932**	0.004	0.980	1.021
	REL	−0.010	0.116	−0.005	−0.083	0.934	0.979	1.022
	INC	−0.035	0.070	−0.032	−0.500	0.617	0.980	1.020
							Average VIF	= 1.023

Note(s): a. Dependent Variable: FT; **significant at 0.01. *Number of observations = 225*
Source(s): Author's computation (2023) from SPSS version 25

Table 6.
Regression analysis:
$FT_i = \beta_0 + \beta_1 EI_i + \beta_2 GEN_i + \beta_3 AI_i + \beta_4 REL_i + \beta_5 INC_i + \varepsilon_i$

5. Discussion

This study examined the association between emotional intelligence and fraud tendency. The descriptive analysis results indicate that the participants (who are future accountants) exhibit a high level of EI, possessing the meta-level ability to understand and manage their emotions and those of others. This finding is similar to Ismail and Rasheed (2019), who found a high level of EI among future accountants in Malaysia. However, despite displaying a high level of EI, the findings indicate that future accountants in Nigeria have a high fraud tendency. They rationalized and justified the fraudulent act in the scenario because of the successes achieved, consenting that the end justifies the means in a fraud situation. They agree that it is not altogether wrong to engage in dishonest practices to achieve desired successes and would engage in such acts if they perceive the end would justify the means. In other words, they are willing to manipulate financial statements to evade tax or reduce their tax liabilities to advance their interest, as simulated in the fraud scenario. This finding aligns with Cressey (1953) on situational pressure, affirming that trustworthy people can betray trust when pressured to seek personal gratifications, a tendency displayed by future accountants in Nigeria, which should concern the counter fraud community, prospective employers, professional accounting bodies, the government and all stakeholders.

Contrary to the negative 'a priori' expectation, the study found statistical evidence from the correlation and regression analyses that support a positive association between EI and fraud tendency. Though EI significantly predicts fraud tendency, the positive association suggests that future accountants in Nigeria who are emotionally intelligent have a more heightened tendency to rationalize and engage in occupational fraud. That is, fraud tendency is higher in emotionally intelligent individuals, despite having the ability to regulate and manage one's emotions and understand the effects of these emotions on others. While prior literature suggests EI makes a leader effective (Goleman, 1998; Bradbury and Graves, 2005), enhances his job performance (Law *et al.*, 2008) and aids his cognitive processes in decision-making (Angelidis and Ibrahim, 2011; Ismail, 2015), this study suggests emotionally intelligent individuals have a high tendency to rationalize and engage in occupational fraud. Though this finding sits at odds with Rahmatullah *et al.* (2018), who associated EQ with low fraud tendency, it agrees with Gaspar *et al.* (2021) that emotionally intelligent individuals have the highest likelihood to deceive or act fraudulently. One reason for the high fraud tendency among future accountants in Nigeria may be a result of what Okunade and Shehu (2015) and Ibrahim and Bukar (2021) describe as the "get-rich-quick syndrome" among many young Nigerians. Besides, the ACFE (2020) confirmed that occupational fraud is on the rise globally, but the fraud profile in developing countries is worrying (Ajibolade and Oboh, 2017; Oboh and Ajibolade, 2018; Ogunleye, 2015; Transparency International, 2020), which may account for the high fraud tendency among future accountants in Nigeria.

Furthermore, of the four control variables included in the regression model to address any omitted variables-related issues, academic intelligence alone positively associates with fraud tendency. Gender, religion and income did not significantly associate with the fraud tendency of the participants. The positive association between academic intelligence and fraud tendency suggests that the tendency to rationalize and engage in occupational fraud is high in academically intelligent individuals. This finding aligns with the arguments of Wolfe and Hermanson (2004) and Marks (2019) that fraud perpetrators possess some intelligence and ability to diagnose and exploit fraud opportunities and make them a reality. Thus, from the evidence in this study, it is logical to argue that fraud rationalization and tendency are higher in intellectually intelligent individuals, which enables them to scheme, commit and conceal a fraud. That is, it requires some intellectual ability to manipulate internal control systems, rationalize, invent cover-up schemes and exploit fraud opportunities in organizations, especially financial statement fraud which requires a high level of intellectual intelligence to execute successfully. Though this finding adds to the literature, more empirical studies are

needed to establish a strong tie between academic intelligence and the tendency of individuals to rationalize and engage in occupational fraud.

6. Conclusion and implications for theory and practice

The independent associations of EI and fraud tendency with other variables have been studied previously. But this study directly associates these two inherent behavioral factors together, being the first to do so from a developing country. Though contrary to the negative *a priori* expectation, the study found a positive association between the two variables (EI and fraud tendency), which constitutes the main contribution of this study. The positive association between the variables suggests that future accountants in Nigeria that are emotionally intelligent have a high tendency to rationalize and engage in occupational fraud. Thus, fraud theorists and behavioral psychologists would find the study helpful in recommending counter fraud interventions to limit rationalization behaviors among accountants and, by extension, other professionals.

Also, given that previous studies of fraud tendency and rationalization behavior towards occupational fraud have focused on developed countries, focusing on future accountants in Nigeria adds significantly to the empirical evidence regarding the developing world, which is the second contribution of this study. This contribution is of particular significance considering the research topic because Nigeria represents developing countries with high-fraud profiles and underdeveloped counter fraud strategies (Bakre, 2007; Oboh, 2019; The Central Bank of Nigeria (CBN), 2017; The Nigeria Inter-Bank Settlement System (NIBSS), 2020; Transparency International, 2020). And so, the study would benefit the counter fraud community in Nigeria and serve as a benchmark for future research in other developing countries with similar fraud profiles. Likewise, previous studies on occupational fraud were limited to external factors focusing on managers, directors and other employees of companies, but the study of future accountants who are potential preparers of financial statements, auditors, tax consultants and management accountants offers rare insights into the fraud tendency of these aspiring professionals. Thus, recruiters, employers and human resource managers will find the study beneficial in decision-making relating to job recruitment, placements and moral orientation for prospective accountant employees.

As part of its contributions, this study found a direct association between academic intelligence and fraud tendency, which is positive, suggesting that the tendency to rationalize and engage in occupational fraud is high in academically intelligent individuals. Thus, the study complements previous studies from developed countries, especially the studies of Wolfe and Hermanson (2004) and Marks (2019) that introduced capability and competence as fraud factors that enable perpetrators to diagnose, exploit opportunities to commit fraud, and conceal them.

Finally, this study combines two stages (moral judgment and moral intention) of Rest's (1979) EDM model and applies Cressey's (1953) fraud triangle to create a scenario and scale that measures fraud tendency. It performed a Cronbach alpha test to estimate the consistency of the measurement composition parameters and how well each questionnaire item measures the variables. The outcome of the Cronbach tests, which is adequate, suggests that future researchers can adopt the scenario and scale to measure individual fraud tendencies, as they reflect a real-life fraud situation commonly found in developing countries with high-fraud profiles. In addition, as suggested by psychometricians, no one measure is regarded entirely as valid in every context, but measurement scales undergo continuous validation processes (Flory *et al.*, 1992; Meadows, 2003), and the measures of potentially broad construct, such as EI and fraud tendency, must be subjected to tests in various settings and with different groups to confirm that the initial results are not artifacts of a particular group or sceneries. Thus, using the EIQ in this study further validates the measurement scales obtained from the NHS leadership toolkit.

7. Limitations and suggestions for future research

This study has achieved its objectives by providing empirical evidence on the direct association between EI and the tendency of future accountants to rationalize and engage in occupational fraud. Nevertheless, it acknowledges that since it is among the first to associate fraud tendency with EI, further studies will be needed to corroborate its finding. Due to the fact that the study is performed in a specific country and on specific respondents, a caveat should be observed when generalizing its findings. Because of its limitations, there are other ways to build on the current study. First, future research can advance knowledge on fraud tendency by using a mix of questionnaires and interviews to collect data to allow the participants to share their experiences with fraud. Second, future studies can adopt and validate the scenario and scale developed in this study to measure individual fraud tendencies in other countries. Finally, future research will benefit from a larger sample, as the COVID-19 pandemic limited the data collection in this study.

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Appendix 1
Research instrument – questionnaire

SECTION A

A1.	GENDER	A2.	AGE BRACKET
Male ( ) Female ( )		Below 21 years ( ) 21–< 25 years ( ) 25 – 30 years ( ) Above 30 years ( )	

A3.	UNIVERSITY
	University of Lagos ( ) Lagos State University ( ) Afe Babalola University ( )

A4.	CURRENT/LATEST CGPA
	Below 1.50 ( ) 1.50-2.49 ( ) 2.50 – 3.49 ( ) 3.50 – 4.49 ( ) 4.50 – 5.00 ( )

A5.	RELIGION
	Christianity ( ) Islam ( ) Traditionalist ( ) Atheist ( ) Others…………….

A6.	MONTHLY UPKEEP / INCOME / STIPEND/POCKET MONEY
	Less than ₦5,000/month ( ) ₦5,000 -<₦10,000/month ( )
	₦10,000 - ₦20,000/month ( ) Above ₦20,000/month ( )

SECTION B

Akin Peters is a final year accounting student who has no sponsor but runs a small business which he uses to cater for himself and his younger siblings. He considers the fact that he has to grow his business and pay his outstanding school fees to sit for his final examinations. So, he decides not to disclose his actual income so as to reduce his tax liabilities. Akin Peters eventually graduates with a first-class degree in accounting and wins both national and international awards. Also, his business grew into a multinational company, where he manages over 4,000 employees and gives scholarships to indigent students.

Please respond HONESTLY to the statements below in relation to Akin Peters' decision								
Strongly Agree (5)	Agree (4)	Neither Agree nor Disagree (3)	Disagree (2)	Strongly Disagree (1)				
S/N	Statements							
1	Akin Peters is not altogether wrong in his decision since it is to advance himself in life.	5	4	3	2	1		
2	Occasionally, it is not totally wrong to make such decisions to achieve greater heights in life.	5	4	3	2	1		
3	Akin Peters' successes justify the decision he made.	5	4	3	2	1		
4	If I were Akin Peters, I would make the same decision to achieve greater heights in life.	5	4	3	2	1		

SECTION C

INSTRUCTION: Please indicate the extent to which you agree with each statement by marking the number corresponding to your level of agreement with each statement. There is no right or wrong answer.

Strongly Agree (5) Agree (4) Neither Agree nor Disagree (3) Disagree (2) Strongly Disagree (1)					
1. I realize immediately when I lose my temper	5	4	3	2	1
2. I can 'reframe' bad situations quickly	5	4	3	2	1
3. I am able to always motive myself to do difficult tasks	5	4	3	2	1
4. I am always able to see things from the other person's viewpoint	5	4	3	2	1
5. I am an excellent listener	5	4	3	2	1
6. I know when I am happy	5	4	3	2	1
7. I do not wear my 'heart on my sleeve' (that is, you do not show how you feel about a thing openly)	5	4	3	2	1
8. I am usually able to priorities important activities at school and get on with them	5	4	3	2	1
9. I am excellent at empathizing with someone else's problem	5	4	3	2	1
10. I never interrupt other people's conversations	5	4	3	2	1
11. I usually recognize when I am stressed	5	4	3	2	1
12. Others can rarely tell what kind of mood I am in	5	4	3	2	1
13. I always meet deadlines	5	4	3	2	1
14. I can tell if someone is not happy with me	5	4	3	2	1
15. I am good at adapting and mixing with a variety of people	5	4	3	2	1
16. When I am being 'emotional' I am aware of this	5	4	3	2	1
17. I rarely 'fly off the handle' (that is, get angry) at other people	5	4	3	2	1
18. I never waste time	5	4	3	2	1
19. I can tell if a team of people is not getting along with each other	5	4	3	2	1
20. People are the most interesting thing in life for me	5	4	3	2	1
21. When I feel anxious I usually can account for the reason(s)	5	4	3	2	1
22. Difficult people do not annoy me	5	4	3	2	1
23. I do not prevaricate (that is, you do not 'beat around the bush' when giving your answer, opinion, or account of a situation)	5	4	3	2	1
24. I can usually understand why people are being difficult towards me	5	4	3	2	1
25. I love to meet new people and get to know what makes them 'tick'	5	4	3	2	1

26. I always know when I'm being unreasonable		5 4 3 2 1
27. I can consciously alter my frame of mind or mood		5 4 3 2 1
28. I believe you should do the difficult things first		5 4 3 2 1
29. Other individuals are not 'difficult' just'different'		5 4 3 2 1
30. I need a variety of work colleagues to make my job interesting		5 4 3 2 1
31. Awareness of my own emotions is very important to me at all times		5 4 3 2 1
32. I do not let stressful situations or people affect me once I have left work		5 4 3 2 1
33. Delayed gratification is a virtue that I hold to		5 4 3 2 1
34. I can understand if I am being unreasonable		5 4 3 2 1
35. I like to ask questions to find out what it is important to people		5 4 3 2 1
36. I can tell if someone has upset or annoyed me		5 4 3 2 1
37. I rarely worry about work or life in general		5 4 3 2 1
38. I believe in 'Action this Day' (that is, taking action each day to achieve a goal)		5 4 3 2 1
39. I can understand why my actions sometimes offend others		5 4 3 2 1
40. I see working with difficult people as simply a challenge to win them over		5 4 3 2 1
41. I can let anger 'go' quickly so that it no longer affects me		5 4 3 2 1
42. I can suppress my emotions when I need to		5 4 3 2 1
43. I can always motivate myself even when I feel low		5 4 3 2 1
44. I can sometimes see things from others' point of view		5 4 3 2 1
45. I am good at reconciling differences with other people		5 4 3 2 1
46. I know what makes me happy		5 4 3 2 1
47. Others often do not know how I am feeling about things		5 4 3 2 1
48. Motivations have been the key to my success		5 4 3 2 1
49. Reasons for disagreements are always clear to me		5 4 3 2 1
50. I generally build solid relationships with those I work with		5 4 3 2 1

Measurement key for Section C – Emotional Intelligence				
Self-awareness	Self-regulation	Motivation	Empathy	Social skill
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40
41	42	43	44	45
46	47	48	49	50

Source(s): Questionnaire developed by the author (2023)
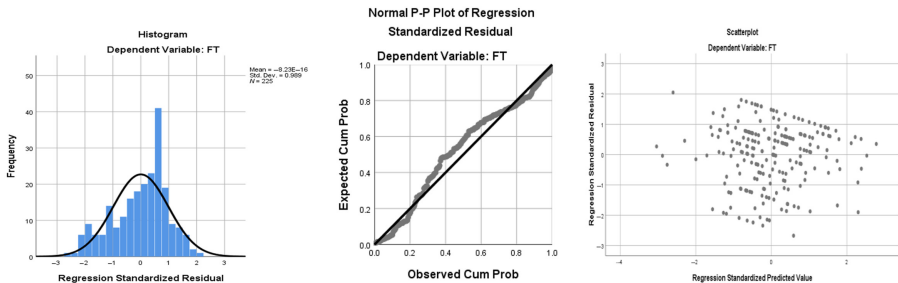
Appendix 2

Figure A1.
Test of normality, homogeneity and linearity - emotional intelligence and fraud tendency

Source(s): Author's computation (2023) from SPSS version 25

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