The moderating effect of the role of accrual basis application controls on the association between government rules application controls on the quality of financial reporting

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ABSTRACT

This study aims to investigate the combined impact of governance regulations and controls on the accuracy of financial reporting. The study also sought to determine how the application controls for the accrual basis affected the link between governance rules and financial reporting quality. A questionnaire research methodology was used to evaluate the study's postulated model. Only 242 of the 348 completed surveys were returned and could be used. The partial least squares method was applied to structural equation modelling. The statistical results confirmed the influence of application constraints on governance norms on the calibration of financial reporting. The influence of governance rule application controls on the calibration of financial reporting was also shown to be mitigated by application controls on an accrual basis. This study, like others has limitations on the variables, years, nation and sample. As a result, several restrictions and recommendations for further research investigations are given at the end of this study. Additionally, the market might use the study's conclusions to help management strengthen their financial reporting inadequacies. This is a rare and unique empirical study that examines the relationship between financial reporting quality and governance rules application controls (GRAC) and takes into account both the influence of GRAC on financial reporting quality and the moderating effect of accrual basis application controls (ABAC).

Contributions/Originality: This study is among a limited set of research endeavors that employed PLS-SEM to examine the influence of governance norms and controls on the precision of financial reporting. The primary finding of the paper is the identification of a direct relationship between governance regulations and the implementation of controls to ensure the precision of financial reporting.

1. INTRODUCTION

The pressure of globalization, new technologies and social and cultural environments encourages excellent company governance and promotes financial information transparency. Furthermore, corporate financial scandals that have rocked a number of businesses (including Enron and WorldCom) have severely affected stakeholders'
behavior and led to a crisis of confidence about the accuracy of financial information. The main cause of these failures was the inherent conflict of interest in the agency relationship between the owners and managers. Rules have to be adopted in order for the government to control the conduct of all parties involved in the conflict. A relationship between two parties where one party serves as the principal (such as a stockholder) and the other acts as an agent (such as a manager) on the principal's behalf is referred to as "an agency" in general (Fama, 1980; Fama & Jensen, 1983). Stakeholders are becoming more critical of public sector financial reporting (FR) due to the financial crisis, globalization and corporate non-financial information disclosure (Arvidsson, 2011). Financial reporting (FR) is one of the key pillars of the public sector's ability to compete in an increasingly competitive global marketplace. In the context of government organisations, "public accountability" refers to providing information and revealing financial operations and performance to parties interested in the report (Mardiams, 2018).

Both public and private businesses are interested in financial reporting quality (FRQ). Processes and laws should be put in place to improve FRQ at public institutions. Internal and external monitoring methods play a part in preserving FRQ according to agency theory and earlier study done in the private sector (Pham, Truong, Ho, & Nguyen, 2022). According to Krambia-Kapardis, Clark, and Zopiatis (2016) and Pham, Ho, Nguyen, Pham, and Bui (2023), the firm's adoption of internal monitoring measures limits the use of accounting tools for self-interested conduct on the part of the leaders in the context of asymmetric knowledge. Studies on the operation of FRQ supervisory systems in public firms are scarce in contrast to research conducted in the private sector. Academic research hasn't paid much attention to how independent audits (INA) affect FRQ in particular (Pham et al., 2022). According to global fraud research carried out in 2016 by the Association of Certified Fraud Examiners, the public sector has the second-highest representation after the banking and financial services industries, according to the World Bank's 2017 report. These infractions often include manipulations in accounting or reporting as well as other accounting irregularities. As a result, it is now crucial to get additional knowledge about the FRQ features in these units with a specific theoretical foundation (Pham et al., 2022). One of the information channels listed companies are expected to make available on the stock market are financial statements. Expectations and reality still differ significantly when it comes to how information is presented and made available to meet user needs. The development, presentation and disclosure processes of listed businesses must be successful for FRQ to operate as intended (Phuong & Hung, 2020). Today's researchers take a variety of angles when approaching the idea and assessment of FRQ. Most research has examined FRQ indirectly by accounting for behaviours such as earnings management (EM), financial restatement and financial statement fraud (Francis, Schipper, & Vincent, 2003). Financial data is the FRQ's main consideration (Cohen, Krishnamoorthy, & Wright, 2004). The connection between corporate governance (CG) and business performance has been supported by several studies (Merendino & Melville, 2019). But even though these studies show how CG affects the QFR, there has not been much, if any, research done on CG aspects. However, there are not many significant differences between the public and private sectors' CG models (Matei & Drumasu, 2015). Similar to how CG in the early 1990s in the private sector sought to enhance corporate management, increase accountability and transparency and do so in order to regain citizens' trust (Matei & Drumasu, 2015). According to Cohen et al. (2004), the assurance of the FRQ process is one of the most important tasks that CG may carry out. According to Fama and Jensen (1983), independent directors are an essential part of a board's ability to properly monitor management behavior. Monitoring activities are one of the main duties of independent directors who are crucial in controlling the financial reporting process (Anderson, Mansi, & Reeb, 2004) because they are less closely associated with management, independent directors should theoretically be able to better protect the interests of shareholders (Fama, 1980; Fama & Jensen, 1983). FR information must also contain non-financial information such as management reports and analyses, auditors' statements and other reports (Beest, Braam, & Boelens, 2009). The accuracy of profit data significantly affects the value of financial statistics (Ball & Shivakumar, 2005). Stakeholders depend more on profit
information and its components to assess company performance and forecast future cash flows (Dechow, Kothari, & Watts, 1998). When a client’s enterprise risk management (ERM) system is poor, significant risks that have an impact on FR may not be detected, analyzed or disclosed (Cohen, Krishnamoorthy, & Wright, 2017). ERM has an impact on risk monitoring and control which has an impact on internal controls and auditor risk assessment (Bell, Marrs, & Solomon, 1997; Bell, Peecher, Solomon, Campbell, & Hughes, 2005). An auditor may be worried about an ERM flaw while assessing the accuracy of accounting estimates and values which in turn affects the FR process.

Research on accrual-based application controls, governance principles, and their impact on the accuracy of FR in the public sector is limited. In the same way, no research has been done explicitly on universities and educational institutions in the Middle East and the Kingdom of Saudi Arabia (KSA). This work makes an effort to close this gap. The following portion of this paper presents the theoretical literature and the process of developing hypotheses. Sections 2 and 3 each address the techniques and data analysis, findings, and discussion while section 4 covers the conclusion. The final portion covers theoretical ramifications and recommendations for future research.

2. LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESIS

The following section emphasised the relationship between independent and dependent variables:

2.1. Financial Reporting Quality

According to the IASB (2010), attributes that provide the information included within financial statements that is valuable to stakeholders are commonly referred to as information quality. The four attributes that enhance the quality of information are compatibility, verifiability, timeliness and understandability. Additionally, two key aspects of information are its relevance and its faithful portrayal. The International Accounting Standards Board (IASB) highlighted four primary attributes of financial statements in its 2006 publication, IPSAS1, specifically for the public sector. These attributes are comprehensibility, relevance, reliability and comparability. The conceptual framework for general-purpose financial reporting by public sector entities (IPSAS, 2022) incorporates six qualitative criteria: verifiability, timeliness, true representation, relevance and understandability. IASB (2010) defines information quality as the attributes of accounting research data and IPSAS and IASB qualitative elements are used to measure FRQ.

According to Bellanca and Vandernoot (2014), IPSAS makes the public sector in Europe and worldwide more comparable, clear, and transparent. They examined IPSAS utilization in EU countries. The FRQ scale employs IPSAS1 and government accounting standards (Suwanda, 2015). Relevance, dependability, understandability and comparability are its four main components. Tran, Nguyen, and Hoang (2022) employ 14 questions based on the IPSASB 2013 to assess the FRQ in public organisations. According to Givoly, Hayn, and Katz (2010), the "demand" and "opportunistic behavior" hypotheses are competing for the same sets of explanations that favor either public businesses or private enterprises as having greater FRQ.

According to the demand hypothesis, public companies place a higher value on high-quality public information. Public corporations differ from private enterprises in terms of the distribution of ownership, the separation between owners and managers and the ownership held by managers (Hope, Langli, & Thomas, 2012).

External stakeholders expect reliable information due to the inherent information imbalance caused by these ownership features. In contrast to the demand theory, the opportunistic conduct hypothesis suggests that managers of public enterprises hide their actual performance from others by manipulating financial information (Hope, Thomas, & Vyas, 2013). Publicly listed firms face increasing pressure from capital markets to evaluate accruals in order to meet profit objectives (Graham, Harvey, & Rajgopal, 2005).

The relationships between the research variables and FRQ will be examined in the following sections in order to validate the hypotheses that have been provided.
2.2. Audit Committees and Quality of Financial Reporting

The function of the audit committee in managing corporate affairs has become more important due to the increasing complexity of modern companies and the growing demand for corporate responsibility (Braiotta, Gazzaway, Colson, & Ramamoorti, 2015). According to the AICPA, an audit committee is a committee or similar entity that a company’s board of directors (BOD) establishes. Its primary responsibility is to supervise the accounting and financial reporting procedures of the company as well as the audits of its financial statements (Braiotta et al., 2015). There is clear evidence of a significant rise and worldwide uniformity in the utilization of audit committees. For example, all public-interest corporations in Europe are required by law to set up audit committees (Collier & Zaman, 2005). Similarly, the Sarbanes-Oxley Act of 2002, which was passed in the United States, requires firms to establish audit committees and disclose the committee members in their annual reports along with other obligations.

Multiple studies have confirmed the importance of audit committees in the public sector (Al-Matari, Al-Swidi, & Fadzil, 2014; Al-Matari, Al-Swidi, Fadzil, & Al-Matari, 2012; Bozec & Dia, 2007; Hegazy & Stafford, 2016; Purcell, Francis, & Clark, 2014; Rainsbury, Malthus, & Capper, 2012; Thomas & Purcell, 2019). In their study, Bozec and Dia (2007) discovered that the inclusion of an audit committee in Canadian state-owned enterprises led to a decrease in earnings management. This indicates that the establishment of an audit committee helps to limit the deliberate manipulation of results. Rainsbury et al. (2012) found that Public Sector Enterprises (PSEs) that get more government support and rely on rate payers and loan providers for financing are more likely to have audit committees consisting mostly of independent members.

Furthermore, the recommended course of action calls for strengthening the culture of sound governance within the local government and establishing an efficient audit committee (AC) to oversee compliance, governance, internal control and risk-management procedures (Purcell et al., 2014). Moreover, Thomas and Purcell (2019) showed that an effective audit committee in the local government prevents council members from listening to or blocking constructive initiatives and alerts external stakeholders to organizational risks. However, Hegazy and Stafford (2016) demonstrated the importance of ensuring that ACs are suitable for institutional and organizational settings in the English public sector.

A considerable amount of literature has been published on the role of audit committees in FRQ. These studies show that audit committee (Alzeban, 2020), audit committee independence (Kusnadi, Leong, Suwardy, & Wang, 2016; Salehi & Shirazi, 2016) AC expertise and size (Salehi & Shirazi, 2016) frequency of audit committee meetings (Gebrayel, Jarrar, Salloum, & Lefebvre, 2018) and active audit committee heads or financial experts (Tanyi & Smith, 2015) positively affect FRQ. In contrast, Rainsbury, Bradbury, and Cahan (2009) found no evidence that increasing audit committee independence improves FRQ but an audit committee with a mix of accounting, finance and supervisory expertise produces FR of higher quality. Additionally, Bajra and Čadež (2018) demonstrated that having audit committees is a required but not sufficient condition for improving FRQ whereas audit committee monitoring efficacy and competencies are favourably associated with FRQ.

More recently, several authors have considered the effects of audit committees on FRQ (Agyei-Mensah, 2022; Chalevas, Giannopoulos, Koutoupis, & Samara, 2021; Mardessi, 2022; Safari, Piteneoi, & Abdullahi, 2021). Mardessi (2022) reported a positive and significant relationship between committee independence and FRQ. However, Safari et al. (2021) indicated that there was no significant effect on FRQ. This mixed finding might reflect the context in which the study was conducted. Amsterdam stock exchange AEX listed firms for Mardessi (2022) and Tehran Stock Exchange TSE listed companies for Safari et al. (2021). The AC’s financial expertise as an important attribute of the audit has a significant and positive impact on FRQ (Mardessi, 2022; Safari et al., 2021). Additionally, audit committee size has a significant positive relationship with FRQ (Agyei-Mensah, 2022) and real earnings management (Mardessi, 2022). However, Mardessi (2022) demonstrated no significant effect of audit committee meetings on real earnings management. Furthermore, Chalevas et al. (2021) found that the audit
committee's form and competencies might considerably enhance FRQ with regard to the AC's duty to raise the auditor's business expertise and monitor the auditor's independence. The study involved 138 public interest entities (PIEs). Hence, it could conceivably be hypothesized that

\[ H_0: \text{Financial reporting quality is significantly and favorably impacted by governance rules and application controls.} \]

\[ H_1: \text{Financial reporting quality is positively and significantly impacted by governance regulations (audit committees).} \]

2.3. Board of Directors and Quality of Financial Reporting

The board directs management and corporate initiatives to create long-term value (Al-Matari, 2022; Roundtable, 2016). Directors are observers not managers. The board also directly oversees the outside auditor and executive salaries (Al-Matari, Mganmal, Alosaimi, Alruwaili, & Al-Bogami, 2022). The Corporate Governance Institute (2022) defined the board of directors as “a group of elected individuals representing the shareholders”. The board of directors is a governing body that regularly meets to establish policies and supervise corporate management. A good board of directors should have both internal and external non-executive directors and should represent both management and shareholder interests (Corporate Governance Institute, 2022).

FRQ is impacted by effective company governance policies and one of the factors that determines whether FRQ is successful is independence (Abu-Risheh & Al-Sa'eed, 2012). They discovered significant relationships between FRQ and board transparency, board independence and independent audit committees. The presence (and proportion) of directors with legal expertise in the audit committee is related to improved FRQ (Krishnan, Wen, & Zhao, 2011). Alzoubi (2014) finds that a board's character plays a significant role in identifying EM which enhances the accuracy of FR. If a company has an audit committee, additional independent directors or independent financial directors on the board, it is more likely to produce high-quality accounting profit information (Qinghua, Pingxin, & Junming, 2007). Phuong and Hung (2020) discovered that the independence, size and chairperson or CEO of the board of directors have a favourable influence on FRQ whereas the frequency of board meetings has a negative impact. These findings were based on data from 2162 observations of listed Vietnamese energy firms from 2010 to 2018. The context of the public sector board of directors was not adequately studied by researchers (Dewata, Hadi, & Jauhari, 2016; Dimitropoulos & Asteriou, 2010).

Research on a sample of fifty state-owned companies that were listed between 2010 and 2014 on the Indonesian stock exchange was carried out by Dewata et al. (2016). The findings showed that the percentage of independent commissioners, board size and government ownership had no discernible effects on the quality of FR. Similarly, Dimitropoulos and Asteriou (2010) examined Greek capital market publicly listed enterprises throughout the period of 2000–2004. Their results showed that the share of external directors on the board was positively connected with the size of the board but the size of the board did not affect the informativeness of annual accounting earnings. Moreover, companies with a larger percentage of external directors produced better-quality results than those with a lower number of external directors.

Recent studies have focused on the impact of BOD attributes such as board size (Qawqzeh, Endut, & Rashid, 2021) board independence (Arcas-Pellicer, Pina, & Torres, 2022; Qawqzeh et al., 2021) and board expertise. The findings showed that board size and the presence of independent directors had a negative and significant impact on FRQ. Kaawaase, Nairuba, Akankunda, and Bananuka (2021) demonstrate that board job performance and board knowledge are strongly related to FRQ. Additionally, the size of the governing body and the proportion of independent members are other factors that contribute to FRQ (Garcia-Lacalle & Torres, 2021). Furthermore, the proportion of women on boards and independent directors in Spain’s central government institutions as well as abnormal accruals are significantly inversely correlated (Arcas-Pellicer et al., 2022; Qawqzeh et al., 2021). Hence, it could conceivably be hypothesized that:

\[ H_0: \text{Governance rules (boards of directors) have a positive and significant effect on financial reporting quality.} \]
2.4. Risk Management and Quality of Financial Reporting

According to CIPFA (2013), entities in the public sector deal with a wide range of internal and external factors that could compromise the achievement of their goals. Risk is the impact of this uncertainty on goals which can be either positive (opportunities) or negative (risks). An accurate risk assessment helps organizations decide how much risk they are willing to take and how to put the necessary controls in place to achieve their goals. The idea of risk must be ingrained in the organization's culture and governing body members and managers at all levels must understand that risk management is an essential component of all their operations. Being risk-aware is preferable to being risk-averse and organizations should not be so cautious as to pass up opportunities (CIPFA, 2013). It is almost impossible for management to validate the activities of the entire public sector to ensure strict adherence to internal control principles and reduce the negative effects of risk. The significance of quality of FR, compliance and dedication to ethical ideals is critical to alternative sustainability (Kong, Larrey, Bah, & Biswas, 2018).

One of the most turbulent corporate events in history was the bankruptcy of WorldCom, a large energy company and one of the largest US banks, Lehman Brothers due to a lack of internal control and an increase in risk (Ma & Ma, 2011). Cohen et al. (2017) conducted semi-structured interviews with people who make up governance triads in 11 public businesses. They discovered a close relationship between risk management and the FR process. The experiences of the actual roles that members of the triad play are dominated by agency theory even though resource dependency may be underemphasized. According to Brown, Pott, and Wömpener (2014), German firms have less profit smoothing and more timely loss recognition following control and transparency legislation. This is consistent with the accomplishment of one of the goals of internal control and risk management (ICRM) regulation to improve accounting quality through efficient ICRM systems. All of the aforementioned information taken collectively suggests a relationship between the FRQ level and the risk management level. Hence, we hypothesize as follows:

H₄: Governance rules (risk management) have a positive and significant effect on financial reporting quality.

2.5. Stakeholders and Quality of Financial Reporting

According to Freeman (1984), a stakeholder is any organization or individual that has the ability to affect or is affected by the achievement of a corporation's goals. Stakeholders include banks, environmentalists, shareholders, workers, customers, suppliers and other groups that could benefit or harm the business. Financial reports that meet the demands of stakeholders and disseminate information to a wide range of direct and indirect individual and group stakeholders are produced as part of the FR process (Stitttle, 2003). When allocating resources within an organization, the efficacy of FR is advantageous (Sabauri & Kvatashidze, 2018). It is emphasized that the quality of a company’s FR is the only factor that determines its ability to get outside finance and fulfill its responsibility obligations (Chen, Hope, Li, & Wang, 2011; Lin, Wang, & Pan, 2016). Financial information is used by people who make decisions about the likelihood of future net cash inflows to the company and the management of the entity's financial resources (IFRS, 2018). As a result, FRQ is a concern for all the stakeholders involved. Thus, the low efficacy and quality of financial statements contribute to the decline in investor trust (Sitpu, Nasution, & Dani, 2021). It is therefore likely that

H₅: Governance rules (stakeholders) have a positive and significant effect on financial reporting quality.

2.6. Accrual Basis Application Controls and Quality of Financial Reporting

According to Weygandt, Kimmel, and Kieso (2019), the accrual basis is commonly described as "a method of recognizing revenues when they are earned and expenses when they are incurred, irrespective of the timing of cash receipt or payment." Accrual accounting has been successfully implemented by several national governments. This change should not be seen as a goal in itself. External audits should be running smoothly, controls should be secure, and cash accounting should be sound before implementing this reform. Legislative oversight of the executive
branch is essential (Hepworth, 2003). The quality management of government financial reports and the implementation of public sector accounting will have an impact on government agencies’ efforts to avoid fraud as well as their accountability for their work (Santoso & Pambelum, 2008).

Several studies have examined the effect of applying the accrual basis on FR quality with a focus on the public sector. These studies include Hasibuan and Syahrial (2019); Pakpahan, Murwaningsari, and Mayangsari (2022); Cohen et al. (2017); Furqan, Wardhani, Martani, and Setyaningrum (2020); Ibrahim and Al-Matari (2022); Kartika, Shodiq, and Alwi (2020); Nasution (2021); Pakpahan et al. (2022) and Pakpahan et al. (2022). Cohen et al. (2017) assessed how successfully government financial reporting supported Greece's decision-making process using the recently implemented modified cash basis. The findings offer empirical evidence in favour of the advantages of transitioning to full accruals even though the impact is negligible. Furqan et al. (2020) looked at the impact of audit findings and the implementation of audit recommendations on the calibre of financial reports and public services in the setting of Indonesian local governments implementing accrual accounting systems. They concluded that using an accrual accounting system would raise the standard of public services during a time when reporting requirements were more rigorous. According to Hasibuan and Syahrial (2019), Kartika et al. (2020) and Nasution (2021), the public sector’s FRQ is also improved by the implementation of the accrual basis. Accordingly, the effects of the accrual foundation of application controls and governance rules on Al Jouf University's FRQ were reported by Ibrahim and Al-Matari (2022). However, deficiencies in the internal control framework positively and significantly affect the accuracy of Indonesian local government financial reporting (Pakpahan et al., 2022). They provide new perspectives on the link between the quality of the FRQ generated by local governments, the flaws in internal control systems and the audits carried out in the public sector after the accrual-based accounting system was implemented. Consequently, it seems that generally speaking

**H1:** Governance rules have a positive and significant effect on financial reporting quality.

### 2.7. The Moderating Role of Accrual Basis Application Controls

Numerous recent studies have demonstrated a significant relationship between accrual quality application and FRQ in the public sector (Cohen & Karatzimas, 2017; Furqan et al., 2020; Hasibuan & Syahrial, 2019; Kartika et al., 2020; Nasution, 2021). Similarly, accrual quality is considered a common proxy for measuring FRQ (Hasan, Aly, & Hussainey, 2022; Hu, Xue, & Liu, 2022; Khalil, 2022) indicating that a higher level of accrual quality represents a higher level of FRQ. However, the relationship between governance norms and FRQ in the public sector has been demonstrated by numerous prior studies as the sections above have highlighted. We contend that an accrual basis can explain the connection between governance rule application restrictions and FRQ based on the previously mentioned research. The present study raises the possibility that

**H2:** Accrual basis application controls moderate the relationship between the application of governance rules and financial reporting quality.

### 3. RESEARCH METHODOLOGY

This study examined the hypothesized model using survey questionnaires and quantitative methodologies. 344 targeted respondents received Jouf university surveys. Jouf University employs 3599 academic, administrative and financial staff. SPSS and PLS-SEM examined the data.

PLS-SEM is a statistical technique used to estimate the relationship between latent variables in route models. The non-parametric approach under consideration is characterized by its lack of reliance on stringent assumptions regarding both the distribution of the data and the size of the sample. The technique in question is a component-based approach, distinct from the factor-based approach of covariance-based structural equation modeling (SEM). PLS-SEM possesses both benefits and disadvantages which are contingent upon the specific study setting and aims. In addition, PLS-SEM is a statistical technique that is used in academic research. This reference work item
provides an overview of the core principles of PLS-SEM including the process of specifying and estimating route models using PLS-SEM. Additionally, it discusses the evaluation of findings obtained from PLS-SEM analysis along with an exploration of supplementary analytical approaches that may be employed in conjunction with PLS-SEM. Additionally, it demonstrates the utilization of the corporate reputation model through practical implementation.

3.1. Measure

The techniques used to measure the variables were taken from earlier work. Suwanda (2015) and Al-Matari (2022) as well as Ibrahim and Al-Matari created measurements of the quality of FR. Ibrahim and Al-Matari (2022) and Nasution measured ABAC in numerous research studies. Furthermore, Ibrahim, Al-Matari (2022) and Nasution (2021) were used as inspiration for the issues of governance rules and application controls. The questionnaire contains a list of the items used in this inquiry. A five-point Likert scale with a range of "1" (strongly disagree) to "5" (strongly agree) was used to evaluate the replies (strongly agree).

3.2. Procedures for Data

The drop-off research conducted at Jouf University encompassed a total of 348 individuals comprising academic, administrative and financial personnel. The questionnaire was translated into Arabic by an individual who is proficient in both languages. According to research by Brislin (1986), an additional bilingual person translated the Arabic text into English to confirm any possible changes. The validity and reliability of the test are assessed by conducting a comparison between the two English versions. The sample approach employed in this study was a proportionate stratified random sampling technique. The concept was inspired by the organizational structure of Jouf University which encompasses many departments. The researcher can create a sample that fairly represents the greater population by using this method and then extrapolate the results to the total population. The random sampling process involved the utilization of the online application Randomizer and the software Microsoft Office Excel 2013. Hair, Hult, Ringle, and Sarstedt (2014) suggested the utilization of a power analysis test in order to minimize the sample size.

4. DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1. Profile of Respondents

Table 1 shows that the respondents' demographic information was categorized into four groups. 242 of the 348 responses were used to compile the data making up the total number of responses. A response rate of 70% was shown by the data.

<table>
<thead>
<tr>
<th>Variable of demographic</th>
<th>Category</th>
<th>Frequency (N=242)</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>218</td>
<td>90.1</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>24</td>
<td>9.9</td>
</tr>
<tr>
<td>Position</td>
<td>Academic</td>
<td>147</td>
<td>60.7</td>
</tr>
<tr>
<td></td>
<td>Administrative</td>
<td>61</td>
<td>25.3</td>
</tr>
<tr>
<td></td>
<td>Finance</td>
<td>34</td>
<td>14</td>
</tr>
<tr>
<td>Experiences</td>
<td>10 less than 20 years</td>
<td>61</td>
<td>25.2</td>
</tr>
<tr>
<td></td>
<td>More than 20 years</td>
<td>11</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>5 less than 10</td>
<td>112</td>
<td>46.8</td>
</tr>
<tr>
<td></td>
<td>Less than 5 years</td>
<td>58</td>
<td>24</td>
</tr>
<tr>
<td>Qualifications</td>
<td>Bachelor</td>
<td>85</td>
<td>35.1</td>
</tr>
<tr>
<td></td>
<td>Master</td>
<td>21</td>
<td>8.7</td>
</tr>
<tr>
<td></td>
<td>PhD</td>
<td>136</td>
<td>56.2</td>
</tr>
</tbody>
</table>
Men make up 218 of the population or 90.1% and women make up 24 of the population or 9.9%. The majority of respondents (66.2%) have a PhD followed by a bachelor's degree (35.1%) and a master's degree (8.7%) in terms of educational background. As stated in the table, the experience demographic is divided into four categories. 60.7% of respondents work in academic fields followed by administrative workers (25.3%) and financial workers (14%).

4.2. Descriptive Analysis

Table 2 presents the descriptive analysis conducted for each construct. The statistical analysis revealed that the board of directors had the greatest mean (4.159) and the lowest standard deviation (0.840) among the variables examined. The findings indicated that participants possessed a collective comprehension of the significance of the board of directors and their responsibility in evaluating financial reports. In contrast, the stakeholder group has the lowest mean (4.075) and the biggest standard deviation (0.945).

<table>
<thead>
<tr>
<th>Construct</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BD</td>
<td>242</td>
<td>1</td>
<td>5</td>
<td>4.159</td>
<td>0.840</td>
</tr>
<tr>
<td>STA</td>
<td>242</td>
<td>1</td>
<td>5</td>
<td>4.075</td>
<td>0.945</td>
</tr>
<tr>
<td>AC</td>
<td>242</td>
<td>1</td>
<td>5</td>
<td>4.110</td>
<td>0.886</td>
</tr>
<tr>
<td>RISK</td>
<td>242</td>
<td>1</td>
<td>5</td>
<td>4.084</td>
<td>0.861</td>
</tr>
<tr>
<td>ABAC</td>
<td>242</td>
<td>1</td>
<td>5</td>
<td>4.143</td>
<td>0.882</td>
</tr>
<tr>
<td>QFR</td>
<td>242</td>
<td>1</td>
<td>5</td>
<td>4.130</td>
<td>0.872</td>
</tr>
</tbody>
</table>

4.3. Structure Equation Modelling Results

PLS-SEM a non-parametric model testing method is popular in management literature. Wold (1974) recommended PLS-SEM for causal linkage estimation and latent component calculation in route models. Regression series are generated through PLS-SEM rather than convergent fixed-point equations. PLS can predict a few test route models despite their skewed distribution (Bagozzi, 2011). The following sections demonstrate how the model validity and reliability of the measurement model were evaluated prior to evaluating the hypotheses of the structural model.

4.3.1. The Measurement and Outer Model

PLS-SEM verified the estimating model before testing hypotheses. This research used Anderson and Gerbing's (1988) two-stage approach. Content, convergent and discriminant validity were used to evaluate the construct's validity and reliability.

4.3.2. Content Validity

Content validity refers to the situation in which the components used to assess a certain construct inside a model have greater loading values compared to the other constructs. This situation is expounded upon in the literature on multivariate analysis. Chin (1998) and Hair, Anderson, Tatham, and Black (2010) employed the loading variable as a means of assessing content validity resulting in the removal of items that had greater loadings on dimensions other than their intended constructs. According to Table 3, it can be shown that all items exhibited a higher degree of loading on their respective constructions compared to the loading on other constructs. The results highlight the factor loading of the variable products for each construct. This validation confirmed the accuracy of the measurement technique's content.

4.3.3. Convergent Validity

Convergent validity refers to the extent to which items effectively capture and measure a certain notion or construct as described by Hair et al. (2010). The literature on SEM encompasses several statistical measures such
as AVE, composite reliability and component loading. It is necessary to have loading values that are statistically significant and considerably loaded in order to calculate the structures for Table 4. These loading values should be at least 0.7 for variable loading, composite reliability and reliability. Additionally, the AVE should be at least 0.5. The model exhibited convergence as the obtained results aligned with the predetermined cut-off values (Bagozzi & Yi, 1988).

### Table 3. Significant factor loadings

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Loadings</th>
<th>Standard error</th>
<th>T value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BD</td>
<td>BD1</td>
<td>0.880</td>
<td>0.021</td>
<td>42.324</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>BD2</td>
<td>0.911</td>
<td>0.019</td>
<td>48.654</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>BD3</td>
<td>0.922</td>
<td>0.014</td>
<td>64.948</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>BD4</td>
<td>0.809</td>
<td>0.038</td>
<td>21.265</td>
<td>0.000</td>
</tr>
<tr>
<td>STAK</td>
<td>STAK1</td>
<td>0.876</td>
<td>0.027</td>
<td>32.998</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>STAK2</td>
<td>0.911</td>
<td>0.017</td>
<td>52.742</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>STAK3</td>
<td>0.881</td>
<td>0.019</td>
<td>47.066</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>STAK4</td>
<td>0.824</td>
<td>0.028</td>
<td>29.241</td>
<td>0.000</td>
</tr>
<tr>
<td>AC</td>
<td>AC1</td>
<td>0.942</td>
<td>0.012</td>
<td>77.694</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>AC2</td>
<td>0.968</td>
<td>0.006</td>
<td>153.826</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>AC3</td>
<td>0.945</td>
<td>0.010</td>
<td>91.689</td>
<td>0.000</td>
</tr>
<tr>
<td>RISK</td>
<td>RISK1</td>
<td>0.932</td>
<td>0.012</td>
<td>77.364</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>RISK2</td>
<td>0.944</td>
<td>0.011</td>
<td>86.740</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>RISK3</td>
<td>0.926</td>
<td>0.026</td>
<td>36.073</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>RISK4</td>
<td>0.895</td>
<td>0.030</td>
<td>29.818</td>
<td>0.000</td>
</tr>
<tr>
<td>ABAC</td>
<td>ABAC1</td>
<td>0.927</td>
<td>0.018</td>
<td>52.749</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>ABAC2</td>
<td>0.937</td>
<td>0.014</td>
<td>69.059</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>ABAC3</td>
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<td>0.013</td>
<td>73.747</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>ABAC4</td>
<td>0.950</td>
<td>0.010</td>
<td>97.920</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>ABAC5</td>
<td>0.944</td>
<td>0.010</td>
<td>92.944</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>ABAC6</td>
<td>0.941</td>
<td>0.011</td>
<td>85.010</td>
<td>0.000</td>
</tr>
<tr>
<td>QFR</td>
<td>QFR1</td>
<td>0.917</td>
<td>0.014</td>
<td>66.598</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>QFR2</td>
<td>0.944</td>
<td>0.010</td>
<td>96.039</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>QFR3</td>
<td>0.933</td>
<td>0.017</td>
<td>55.318</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>QFR4</td>
<td>0.939</td>
<td>0.013</td>
<td>74.809</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>QFR5</td>
<td>0.831</td>
<td>0.052</td>
<td>15.903</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>QFR6</td>
<td>0.859</td>
<td>0.052</td>
<td>26.759</td>
<td>0.000</td>
</tr>
</tbody>
</table>

### Table 4. Convergent validity analysis

<table>
<thead>
<tr>
<th>Item</th>
<th>Loadings</th>
<th>Cronbach alpha</th>
<th>CR&lt;sup&gt;a&lt;/sup&gt;</th>
<th>AVE&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABAC1</td>
<td>0.927</td>
<td></td>
<td></td>
<td>0.978</td>
</tr>
<tr>
<td>ABAC2</td>
<td>0.937</td>
<td></td>
<td></td>
<td>0.960</td>
</tr>
<tr>
<td>ABAC3</td>
<td>0.935</td>
<td>0.973</td>
<td>0.978</td>
<td>0.882</td>
</tr>
<tr>
<td>ABAC4</td>
<td>0.95</td>
<td></td>
<td></td>
<td>0.966</td>
</tr>
<tr>
<td>ABAC5</td>
<td>0.944</td>
<td></td>
<td></td>
<td>0.933</td>
</tr>
<tr>
<td>ABAC6</td>
<td>0.941</td>
<td></td>
<td></td>
<td>0.959</td>
</tr>
<tr>
<td>AC1</td>
<td>0.942</td>
<td></td>
<td></td>
<td>0.928</td>
</tr>
<tr>
<td>AC2</td>
<td>0.968</td>
<td>0.948</td>
<td>0.966</td>
<td>0.905</td>
</tr>
<tr>
<td>AC3</td>
<td>0.945</td>
<td></td>
<td></td>
<td>0.933</td>
</tr>
<tr>
<td>BD1</td>
<td>0.88</td>
<td></td>
<td></td>
<td>0.959</td>
</tr>
<tr>
<td>BD2</td>
<td>0.911</td>
<td>0.903</td>
<td>0.933</td>
<td>0.777</td>
</tr>
<tr>
<td>BD3</td>
<td>0.922</td>
<td></td>
<td></td>
<td>0.928</td>
</tr>
<tr>
<td>BD4</td>
<td>0.809</td>
<td></td>
<td></td>
<td>0.928</td>
</tr>
<tr>
<td>RISK1</td>
<td>0.932</td>
<td></td>
<td></td>
<td>0.928</td>
</tr>
<tr>
<td>RISK2</td>
<td>0.944</td>
<td>0.943</td>
<td>0.959</td>
<td>0.854</td>
</tr>
<tr>
<td>RISK3</td>
<td>0.926</td>
<td></td>
<td></td>
<td>0.928</td>
</tr>
<tr>
<td>RISK4</td>
<td>0.895</td>
<td></td>
<td></td>
<td>0.928</td>
</tr>
<tr>
<td>STAK1</td>
<td>0.876</td>
<td>0.896</td>
<td>0.928</td>
<td>0.763</td>
</tr>
<tr>
<td>STAK2</td>
<td>0.911</td>
<td></td>
<td></td>
<td>0.928</td>
</tr>
</tbody>
</table>
Item | Loadings | Cronbach alpha | CR$^a$ | AVE$^b$
--- | --- | --- | --- | ---
STAK3 | 0.881 | | | |
STAK4 | 0.824 | | | |
QFR1 | 0.917 | | | |
QFR2 | 0.944 | | | |
QFR3 | 0.933 | | | |
QFR4 | 0.939 | | | |
QFR5 | 0.831 | | | |
QFR6 | 0.859 | | | |

Note: A composite reliability (CR) and average variance extracted (AVE).

In addition, the reliability of the construct was evaluated by comparing the Cronbach alpha values with the composite reliability scores which are shown in Table 4. The purpose of this comparison was to see how reliable the construct is. Researchers from the past such as Hair et al. (2010) and Nunnally and Lemond (1974) have recommended that a cut-off value of 0.7 be used.

The findings demonstrated that the composite reliability coefficient and Cronbach's alpha coefficients both surpassed the 0.7 cut-off value, confirming the reliability and validity of the assessment items that were employed to assess the pertinent variables.

4.3.4. Discriminant Validity

Discriminant validity is a concept commonly employed in SEM research to denote the capacity of a set of items to differentiate a certain construct from other constructs within the model. According to Fornell and Larcker's (1981) advice, the diagonal components in Table 5 should have greater values namely the square roots of the AVE’s compared to the corresponding rows and columns. The value of the measurement was proved by this hypothesis which also provided evidence of its discriminant validity.

<table>
<thead>
<tr>
<th>Construct</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- ABAC</td>
<td>0.939</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2- AC</td>
<td>0.745</td>
<td>0.952</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3- BD</td>
<td>0.742</td>
<td>0.711</td>
<td>0.882</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4- QFR</td>
<td>0.902</td>
<td>0.757</td>
<td>0.738</td>
<td>0.905</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5- RISK</td>
<td>0.833</td>
<td>0.854</td>
<td>0.753</td>
<td>0.801</td>
<td>0.924</td>
<td></td>
</tr>
<tr>
<td>6- STAK</td>
<td>0.753</td>
<td>0.770</td>
<td>0.846</td>
<td>0.771</td>
<td>0.793</td>
<td>0.874</td>
</tr>
</tbody>
</table>

4.4. Structural Model (Inner Model) and Hypotheses Testing

The structural model of the offered hypotheses was evaluated using the SmartPLS algorithm and bootstrapping technique. A number of validities in the sections that came before this analysis were looked at in order to validate the measurement model. The path coefficients and their significance were acquired to ascertain whether or not the assumptions were supported which helped assess the model’s appropriateness.
Figure 1. Path coefficient.

Figure 2. Results of hypothesis testing.

<table>
<thead>
<tr>
<th>No.</th>
<th>Hypothesis</th>
<th>Path coefficient</th>
<th>Standard error</th>
<th>T value</th>
<th>P value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>ABAC → QFR</td>
<td>0.235</td>
<td>0.064</td>
<td>3.684</td>
<td>0.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H1a</td>
<td>BD → QFR</td>
<td>0.169</td>
<td>0.077</td>
<td>2.201</td>
<td>0.028</td>
<td>Supported</td>
</tr>
<tr>
<td>H1b</td>
<td>STAK → QFR</td>
<td>0.208</td>
<td>0.102</td>
<td>2.037</td>
<td>0.042</td>
<td>Supported</td>
</tr>
<tr>
<td>H1c</td>
<td>AC → QFR</td>
<td>0.160</td>
<td>0.065</td>
<td>2.471</td>
<td>0.014</td>
<td>Supported</td>
</tr>
<tr>
<td>H1d</td>
<td>RISK → QFR</td>
<td>0.376</td>
<td>0.102</td>
<td>3.679</td>
<td>0.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>GRAC * ABAC → QFR</td>
<td>-0.055</td>
<td>0.014</td>
<td>5.906</td>
<td>0.000</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Note: *P<0.05.
The statistical analysis conducted at a 0.01 significance level (β=0.235, t=3.684, p>0.01) demonstrates that the adoption of governance rules has a significant impact on the dependability of FR as shown in Figures 1, 2 and 6. The findings also show that ABAC significantly but negatively moderates the relationship between QFR and the various hypotheses (H1a-H1d) pertaining to the application dimension of governance rules which includes the board of directors, stakeholders, audit committees, and risk management. With a coefficient of 0.169, a t-value of 2.201 and a p-value greater than 0.05 for the first hypothesis, a coefficient of 0.208, a t-value of 2.037 and a p-value greater than 0.05 for the second hypothesis and a coefficient of 0.376 for the third, the moderating effects were determined to be statistically insignificant.

4.5. Predictive Relevance of the Model

Cross-Validated Redundancy and R-square measure the model's predictive power. The independent variable describes the variation of the dependent variable using endogenous (exogenous) R-square. The results reveal that governance rules and accrual based application controls accounted for 84% of FRQ variance. Cohen (1988) defines substantial R-square as greater than 0.26, moderate as 0.13 to 0.26 and weak as 0.02 to 0.13. These values are relevant proving this model's frameworks can define FRQ.

Cross-validated redundancy and society values assessed model consistency. They were identified using SmartPLS blindfolding. The blindfolding technique measures missing data values after their removal. The forecasts and actual results will be compared when their values have been calculated. Cross-redundancy values cannot be validated in any other way. Model productiveness must exceed 0. The results show cross-validated redundancy results at 0.681 and communality results at 0.742. The figure confirmed the model's projected accuracy.

4.6. Goodness-of-Fit (GoF) of the Model

Tenenhaus, Vinzi, Chatelin, and Lauro (2005) provide a method to assess the adequacy of a model in PLS-SEM. This approach involves using an equation to compute the average R-square and geometric mean of the endogenous variable facilitating the evaluation of the model's fitness.

\[ \text{GoF} = \sqrt{R^2 \times AVE}. \]

According to the research conducted by Wetzels, Odekerken-Schroder, and van Oppen (2009), it was proposed that the threshold values for goodness of fit (GoF) should be determined as follows: a value of 0.36 would indicate a significant effect size, a value of 0.25 would indicate a moderate effect size and a value of 0.1 would indicate a small effect size. According to these discoveries, it can be observed that the goodness-of-fit (GoF) statistic for this particular study yielded a value of 0.824. This value is deemed statistically significant suggesting that the model employed in the study had satisfactory validity.

4.7. Discussion of the Result

The quality of FR is the most important goal that businesses pursue. They must combine both GRAC and ABAC in order to attain the highest possible degree of FR quality. The advantages of both were investigated in this study with varying degrees of success since they are the primary means of improving the general quality of FR. GRAC and ABAC. This study hypothesized a beneficial relationship between the quality of FR and the adoption of governance principles. According to the findings, this association is supported at 0.01 (β=0.235, t=3.684, p>0.01) supporting H1. This result is consistent with a wide range of previous studies in the literature (Ibrahim & Al-Matari, 2022). Excellent governance practices enable businesses to produce accurate financial reports that give stakeholders, both internal and external, a clear picture and the ability to rely on the reports when making decisions that will advance their goals.
The results showed that the BD has a positive and significant relationship with the quality of FR ($\beta=0.169$, $t=2.201$, $p>0.05$) supporting the hypothesis that the BD has a beneficial impact on the quality of FR. The BD is essential in guiding the management and business strategy of the organization (Roundtable, 2016). Effective directors unlike managers are keen monitors of corporate activity.

The results showed a positive and significant relationship between STAK and the quality of FR ($\beta=0.208$, $t=2.037$, $p>0.05$) supporting the study's further supposition that the stakeholders have a favorable impact on the quality of FR. A crucial part of the FR process is generating financial reports that satisfy STAK requirements and inform a range of direct and indirect individual and group stakeholders (Stittle, 2003). The efficacy of FR is useful in determining resource allocation within an organisation (Sabauri & Kvatashidze, 2018). The results showed that AC have a positive and significant relationship with the quality of FR ($\beta=0.160$, $t=2.471$) supporting the study's hypothesis that they have a favorable impact on the quality of FR. This result is consistent with a wide range of previous studies in the literature (Ibrahim & Al-Matari, 2022; Thomas & Purcell, 2019). The authenticity of financial reports which are regarded as a source of trust by individuals interested in making decisions linked to investment, credit and financing operations is helped by the good FR produced by audit committees.

The results showed a positive and substantial relationship between RISK and the quality of FR ($\beta=0.376$, $t=3.679$, $p>0.01$) supporting the hypothesis that risk management has a beneficial impact on quality of FR. Therefore, work continuity planning is discovered to address the effects of the remaining risks once risk management is employed to prevent losses to the greatest extent possible. Additionally, this study hypothesized that the relationship between the implementation of governance regulations and the accuracy of FR is moderated by accrual basis application restrictions. The findings supported H2 since they showed that the moderating effect of ABAC on the link between the application of governance standards and the quality of FR was likewise significant but adverse ($\beta=-0.055$, $t=3.906$, $p<0.01$).

5. CONCLUSION

The findings demonstrated a substantial and favourable relationship between the quality of FR, governance rules and application controls. Similarly, the findings show that the quality of FR is significantly and favourably correlated with BD, stakeholders, audit committees and risk management. Additionally, application controls on an accrual basis have a sizable moderating impact on application controls for governance rules and the quality of FR. 242 of the 348 responses were used to create the collected data. 70% was the response rate shown in the statistics. The relationship between the application controls for the accrual basis, the governance rules application controls and the quality of FR was examined in this study using PLS-Smart.

6. THEORETICAL IMPLICATIONS

The current work and previous investigations have a lot of theoretical contributions to offer. One of these contributions that did not receive the necessary scholarly attention was the analysis of how governance rule application control affected the standard of FR. We can use this study's support as a basis for further research. A theoretical innovation in the corpus of knowledge is the use of the moderating influence of ABAC to explain the relationship between governance rule application controls and the quality of FR. There has not been much conceptual and descriptive study on the public sector's use of governance rule application controls and the consequences of ABAC. Most of these studies were conducted in the business and private sectors. However, this is a distinct empirical study among the few that focus on the public sector. As a result of entrepreneurial characteristics and activities to develop the business and enhance the quality of FR, the study's findings can practically assist practitioners, managers and decision-makers in improving their quality of FR through the implementation of ABAC practices.
7. SUGGESTIONS FOR FUTURE RESEARCH

There are still a few areas that require more attention despite the fact that this study makes several contributions and provides insightful information. The empirical information used in this study was provided by the public sector. Future studies may study the link in various industrial contexts. It’s possible that subsequent researchers will decide to carry out comparable investigations in many other developing countries in order to contrast and compare the findings. Last but not least, future research may decide to use a longitudinal research technique to perform the research in order to identify dynamic changes in the connections between variables over time. This would validate the findings of this study.

Funding: This research is supported by King Khalid University (Grant number: RGP.2/318/44).

Institutional Review Board Statement: Not applicable. Moreover, the goal is to enhance professional and academic practices without undue burden on participants.

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Competing Interests: The authors declare that they have no competing interests.

Authors’ Contributions: Conceptualization, writing—original draft preparation, E.M.A. and M.A.A.; methodology, software, formal analysis, E.M.A. and H.S.A.; validation, A.A. and A.M.O.; investigation, writing review and editing, A.A., T.K.I. and A.M.O.; resources, data curation, E.M.A. and T.K.I.; visualization, supervision, E.M.A., A.A. and A.M.O.; project administration, funding acquisition, E.M.A. All authors have read and agreed to the published version of the manuscript.

REFERENCES


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