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Mediating effect of appraisal fairness between the relationship of appraisal satisfaction and employee performance appraisal: a case of Bauchi State Teachers Service Commission, Nigeria

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ABSTRACT

Performance appraisal is a vital human resource management component for evaluating employee contributions and productivity. It plays a significant role in aligning employee performance with organizational goals by assessing achievements and recognizing efforts through tangible rewards. This ultimately helps boost morale and drive engagement, which are critical for overall productivity. This study examines the role of appraisal fairness in mediating the relationship between appraisal satisfaction and employee performance at the Bauchi State Teachers Service Commission (TSC). Employing a quantitative approach, data were gathered from 355 out of 5,016 respondents using a structured questionnaire and analyzed with Smart PLS-SEM version 4. The results reveal that performance appraisals significantly enhance work satisfaction and fairness, with fairness in the appraisal process serving as a partial mediator. The study advocates for integrating performance appraisals into the commission's policy framework. The limitations and implications for future study and practice are effectively discussed.

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Human Resource Management; Human Resource Development; Employment Relations; Theatre & Performance Studies

Introduction

Performance appraisal, a crucial element of human resource management, is widely regarded as an essential modern tool for organizations to reward, motivate, and incentivize employees (Lyu et al., 2023). It plays a significant role in aligning employee performance with organizational goals by evaluating achievements and recognizing efforts through tangible rewards. This process helps boost morale and drive engagement, which is critical for overall productivity (Collins, 2021; Uzochukwu et al., 2024). To achieve strategic goals, organizations depend on high-performing employees (Riyanto et al., 2021). Consequently, employers routinely monitor employee productivity to evaluate the workforce's effectiveness and pinpoint areas for necessary improvement. Setting clear, measurable objectives through performance appraisal systems ensures that employees understand their roles and expectations, which is vital for sustained improvement (Singh & Singh, 2019). The integration of performance appraisal systems into human resource management is not just about evaluation but also about creating a culture of continuous feedback and development (Collins, 2021; Lyu et al., 2023; Uzochukwu et al., 2024; Wang et al., 2021). Performance appraisal serves as a tool for reviewing and evaluating employee performance, reinforcing strengths, identifying areas for further development, and supporting employees that are underperforming (Collins, 2021; Lyu et al., 2023; Uzochukwu et al., 2024; Wang et al., 2021). These appraisals also form the basis for rewards and promotions, motivating employees to improve

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performance (Alase & Akinbo, 2021; Dal Corso et al., 2020). Without clear performance metrics, employees may experience job dissatisfaction, weakened commitment to the organization, behavioral issues, and declines in productivity (Na-Nan et al., 2019; Cook et al., 2022). The effectiveness of performance appraisals is heavily influenced by the fairness of the assessment process, including the distribution of rewards and the transparency of procedures (Simon, 2019). Issues of fairness and subjectivity in appraisals are a major concern in human resource management (Mollel et al., 2023), as inequities in reward distribution can demoralize employees and negatively impact productivity (DeConinck, 2010; Erdogan & Bauer, 2014; Na-Nan et al., 2019). In recent years, the global economic landscape and the changing dynamics of modern societies have intensified concerns about the cost-effectiveness of governance and public sector management (Neumann & Schott, 2021). Human resource management practices in organizations typically include policies for employee engagement, evaluation, knowledge sharing, capacity-building, training, and retention (Singh et al., 2020). However, in Nigeria's public sector, political interference has often undermined the objectivity of these practices, in contrast to the private sector (Charles, 2022; Olubukola & Pauline, 2022; Rodrigues et al., 2023; Uzochukwu et al., 2024). Public sector employees frequently perceive the appraisal process as subjective, which has led to dissatisfaction and reduced productivity (Ebegbetale et al., 2023). Research indicates that the absence of clear, transparent performance criteria contributes to ambiguity and subjectivity in the appraisal process, hindering employees' understanding of performance expectations (Charles, 2022; Olubukola & Pauline, 2022; Rodrigues et al., 2023; Uzochukwu et al., 2024). To ensure fair and effective performance appraisals in the public sector, careful management is essential to avoid perceived or actual unfairness, which could further diminish employee morale and productivity (Mollel et al., 2023). The assessment of employee performance has also evolved into a fundamental practice essential for effectively overseeing public services. It stands as a cornerstone within performance management frameworks. Acknowledging the significance of this process, Memon et al. (2021) highlighted the significance of ensuring employee satisfaction with performance appraisals. This aspect is particularly crucial as it contributes to unlocking the full potential of highly skilled individuals, thereby maximizing employee appraisal satisfaction and consequently leading to organizational benefits (Ebegbetale et al., 2023). It is, therefore, essential to apply identical criteria when evaluating the performance of individuals in similar roles, ensuring a fair, transparent, and consistent comparison, as recommended (Vidè et al., 2023). When employees perceive the performance appraisal process as inadequate, it can lead to decreased motivation, dissatisfaction with their work, and a reduced willingness to stay in their current roles, ultimately resulting in diminished productivity (Memon et al., 2021). Conversely, a well-structured employee performance appraisal process provides employees with a clear understanding of the evaluation dimensions and procedures, enabling them to align their efforts with the organization's strategic objectives, thereby leading to greater satisfaction with performance outcomes (Collins, 2021; Lyu et al., 2023; Uzochukwu et al., 2024; Wong, 2019). Organizations that establish satisfactory performance appraisal processes significantly contribute to organizational success (Memon et al., 2021). In this context, Widiyani and Dudija (2020) highlight that satisfaction with the employee performance appraisal process is critical to cultivating attitudes and behaviors that significantly affect employee reactions, especially when the process is perceived as useful and accurate. The usefulness of the employee performance appraisal process lies in its ability to facilitate an assessment of employee performance within a predefined time frame, contributing to various human resources management (HRM) practices and enhancing each employee's potential, leading to improved personal and organizational outcomes (Ahmed & Sattar, 2018; Ebegbetale et al., 2023). Accurate measurement indicators in the performance appraisal process support informed decision-making and prevent results from being influenced by the personal interests of the appraiser or hierarchical superior (He, Chen & Liu, 2020). However, the persistent challenge in numerous public organizations in Nigeria revolves around inadequately designed and structured employee performance appraisal practices, coupled with dissatisfaction concerning assessment procedures and perceived unfairness from supervisors during the appraisal process (Rodrigues et al., 2023; Tadesse, 2021). This, among other factors, sparked the interest of researchers in examining the effectiveness of these constructs, using Bauchi State Teachers Service Commission (TSC) as a case study. Moreover, the research study contributes to the body of knowledge by examining how appraisal fairness is a mediator between appraisal satisfaction and employee performance appraisal within a Nigerian context (Bauchi State TSC).

The research highlights that appraisal fairness is not just a universal factor but one that local cultural, social, and organizational dynamics may shape. It provides valuable contributions to how fairness is perceived in Nigerian public sector institutions, particularly in a hierarchical setting such as the Teachers Service Commission (TSC). The research adds a contextual layer to existing theories (Equity and organizational justice theories), showing how these theories operate in developing countries with different societal norms and practices.

Problem statement

In some regions of Nigeria's public sector management, there is a notable deficiency in effectively executing a viable employee performance appraisal system, which is crucial for optimal human resource management. This system is essential for evaluating the workforce and identifying high-performing individuals for strategic organizational roles. Furthermore, the fairness of the appraisal process is critical, as research indicates that employees' satisfaction is heavily influenced by their perceptions of fairness (Atakpa, Ocheni & Nwankwo, 2021; Charles, 2022; Iorfa, 2021; Nutakor, 2019; Olubukola & Pauline, 2022). Thus, ensuring fairness in the appraisal system is vital for enhancing its effectiveness and overall organizational success (Vidè et al., 2023). A fair employee appraisal system significantly impacts employee morale, engagement, and the overall effectiveness of organizational objectives. In Bauchi State, concerns about declining educational standards, reflected in student performance on state exams, have heightened the need for effective teacher appraisal systems. The state government's initiative to sponsor candidates who pass a mock examination signified the urgency for robust appraisal mechanisms, particularly as some teachers are seen as neglecting their roles while others lack recognition for exceptional performance (Wadata, 2022).

Research gap

While existing literature acknowledges challenges in employee performance appraisals in Nigeria (Atakpa, Ocheni & Nwankwo, 2021; Charles, 2022; Iorfa, 2021; Malumba, 2021; Norfarizal, 2019; Olubukola & Pauline, 2022; Turner, 2020; Zahida & Sufiana, 2022), it often overlooks the mediating role of appraisal fairness. Specifically, there is insufficient clarity on how fairness influences the relationship between employee satisfaction and the effectiveness of appraisals (Zahida & Sufiana, 2022). This gap limits our understanding of how perceptions of fairness impact outcomes within Bauchi State Teachers Service Commission (TSC). Addressing this issue is vital, as equitable appraisal practices could boost employee morale and organizational performance. Further research, therefore, is needed to develop a deeper understanding of these dynamics and to inform effective appraisal strategies that cultivate a positive work environment.

Research objectives

This study examined the mediating effect of appraisal fairness between appraisal satisfaction and employee performance appraisal among Bauchi State Teachers Service Commission employees. A survey was carried out among 355 employees within the commission from the three geographical zones in Bauchi State to achieve the targeted goal. Hence, the specific objectives are outlined below:

- i. To examine the relationship between appraisal satisfaction and fairness at Bauchi State Teachers Service Commission.
- ii. To assess the relationship between appraisal fairness and employee performance appraisal at Bauchi State Teachers Service Commission.
- iii. To evaluate the relationship between appraisal satisfaction and employee performance appraisal at Bauchi State Teachers Service Commission.
- iv. To investigate the mediating relationship of appraisal fairness between appraisal satisfaction and employee performance appraisal at Bauchi State Teachers Service Commission.

Theoretical background and hypotheses development

This section provides the theoretical foundation for the study by reviewing relevant literature and outlining the conceptual framework that informs our research. We begin by discussing critical theories related to appraisal satisfaction, fairness, and employee performance, establishing the context for understanding their interrelationships. Following the theoretical overview, we present the development of our hypotheses. These hypotheses are derived from theoretical insights and aim to showcase how appraisal fairness mediates the relationship between appraisal satisfaction and employee performance. This section later sets the stage for empirical testing by detailing the rationale behind each hypothesis and the expected outcomes based on existing research and theoretical propositions.

Theoretical background

Numerous management theories have been formulated to delve into the complexities of employee performance appraisal practices, specifically emphasizing two prominent theories: Equity Theory, proposed by John Stacey Adams in 1963, and the Organizational Justice Theory, developed by Greenberg in 1986. These theories were selected for their close alignment with appraisal satisfaction and fairness, particularly in the context of employee performance evaluations. Consequently, the research study is anchored in the Equity Theory as its primary theoretical framework, complemented by insights from the Organizational Justice Theory. This dual theoretical approach aims to provide a comprehensive understanding of and enhance employee performance appraisal practices within the chosen case study.

Equity theory

John Stacey Adams introduced the Equity Theory in 1963, offering a lens through which employees' perceptions of fairness regarding their inputs and outcomes in the workplace could be understood. In the context of employee performance appraisals, the Equity Theory signifies the importance of balancing an employee's contributions to their job and the rewards or compensation they receive for their accomplishments (Venkateswaran et al., 2023). When employees feel a fair balance between the effort they invest and the rewards they receive, they tend to be more motivated and demonstrate greater productivity (Tefera & Hunsaker, 2020). According to this theory, if there is an imbalance between what employees contribute and what they receive in return, they are likely to take steps to rectify this discrepancy. This may involve adjusting their level of effort, changing their attitudes, or altering their expectations to restore a sense of equity (Uzochukwu et al., 2024). Fairness is a crucial factor influencing employees' positive attitudes toward their work and expected behaviors. However, instances of unfairness often arise, particularly during performance evaluations, which can be marred by appraisal process flaws or evaluators' biases (Na-Nan et al., 2019). Such issues can significantly impact employee attitudes and behaviors.

Conversely, fair performance appraisals enhance employee morale and boost productivity. Research by Tremblay (2019) looked into the effects of perceived inequity on various employee outcomes, underscoring its detrimental impact on motivation and performance. To improve perceptions of fairness, it is essential to establish transparent criteria for performance appraisals and ensure effective communication regarding the evaluation process (Bretz et al., 1992; Rusbadrol et al., 2021). Additionally, distributing rewards equitably based on performance appraisal results can help alleviate feelings of inequity and foster higher productivity levels (DeConinck, 2010). Equity Theory is a valuable framework for understanding how perceptions of fairness in performance evaluations can significantly affect organizational employee productivity.

Moreover, this theory highlighted that individuals who perceive a fair correlation between their efforts and rewards are more motivated and likely to sustain high performance in their roles (Locke, 1976; Venkateswaran et al., 2023). Adams, a behavioral psychologist in the 1960s, developed the equity theory, emphasizing the intrinsic link between fairness perceptions and worker motivation. People inherently value equitable treatment, and successful entrepreneurs strategically structure their workplaces to recognize and reward individual contributions appropriately. By integrating the Equity Theory into the research

framework, the study aims to uncover how perceptions of fairness influence employee satisfaction in the performance appraisal process. The theory's foundational principles provide a valuable lens for comprehending the psychological dynamics that underlie individuals' reactions to the appraisal process and its impact on their motivation and subsequent performance (Vidè et al., 2023). This theoretical foundation, coupled with insights from the Organizational Justice Theory, forms a robust framework for the research, facilitating an exploration of employee performance appraisal practices and contributing to the ongoing discourse on organizational effectiveness.

Organizational justice theory

Organizational Justice Theory, introduced by Thibaut and Walker in the mid-1970s, supports procedural fairness in resolving disputes related to employee performance appraisal (Abdullah & Malik, 2022; Al-Hunaiyyan et al., 2023; Al-Sharhan et al., 2010). This theory revolves around workplace fairness, primarily based on employees' perceptions (Rupp & Thornton-Lugo, 2018). Organizational justice aligns with fairness theories and was initially connected to employee performance appraisal by Greenberg (1986), indicating that it reflects an organization's commitment to fairness in its practices. Tang and Baldwin (1996) theorized that organizational justice originates from decisions made during the employee performance appraisal. Additionally, Ilgen et al. (1979); Rietsche et al. (2021) affirmed that employee performance appraisal significantly influences employee performance, thereby impacting organizational outcomes. Gruman & Saks (2019) proposed that perceived biased or irrelevant appraisals become a source of employee dissatisfaction. Research has shown that employee performance appraisal processes predict organizational justice (Konovsky & Cropanzano, 1991; Jacobs et al., 2020), enhancing the understanding of inequities or unfairness and their effects on organizations. Organizational justice encompasses the perception of fairness regarding the rewards individuals receive and the treatment they experience within a workplace, aligning with moral and ethical standards (Rusbadrol et al., 2021). This concept is grounded in equity theory, which suggests that employees who feel treated equitably tend to demonstrate positive attitudes toward their work and engage in productive behaviors (Uzochukwu et al., 2024). Conversely, feelings of unfair treatment can lead to negative outcomes, such as decreased job satisfaction (Bakhshi et al., 2009; Ozel & Bayraktar, 2018), diminished organizational commitment (Jiang et al., 2017; Suifan et al., 2017), and reduced organizational citizenship behaviors (Akan et al., 2009; Deng, 2012; Singh & Singh, 2019). When employees perceive a fair balance between their efforts and the rewards they receive, they tend to feel more motivated, resulting in increased productivity (Tefera & Hunsaker, 2020). They assess their contributions concerning the outcomes received through performance evaluations. A perception of a fair exchange positively impacts their productivity levels (Erdogan & Bauer, 2014). Conversely, perceived inequities—such as feeling under-rewarded or over-rewarded compared to colleagues—can lead to lower motivation, job satisfaction, and overall productivity (Cohen-Charash & Spector, 2001). The theory of organizational justice identifies three key dimensions: distributive justice (DJ), procedural justice (PJ), and interactional justice (IJ). Distributive justice pertains to the perceived fairness of outcomes and rewards. Procedural justice focuses on the perceived fairness of the processes and procedures used to make decisions, regardless of the actual outcomes—essentially, how employees view the fairness of the methods employed in decision-making (Lin et al., 2024). Interactional justice relates to the quality of employees' interpersonal treatment, particularly regarding how information is communicated and how individuals are treated during decision-making processes (Hermanto & Srimulyani, 2022). These dimensions significantly influence employee attitudes, behaviors, and overall workplace morale. Moreover, Folger and Konovsky (1989) suggested that procedural and distributive justice evolved from Adams (1963) equity theory. Procedural justice relates to an organization's methods and procedures for determining incentives, compensation, and benefit packages (Folger & Konovsky, 1989). Greenberg and Colquitt (2008) defined procedural justice as the fairness of procedures leading to distributive outcomes. Initially introduced by Thibaut and Walker (1975), procedural justice includes six criteria. Additionally, as noted by Folger and Konovsky (1989), distributive justice involves perceived fairness in an organization's incentives, benefits, and compensation packages. Greenberg (1986) further delineated distributive justice as the equitable distribution of resources, encompassing compensation, rewards, conflict resolution, and job advancement. Lastly, interactional justice refers to employees' interpersonal

treatment by organizational authority figures. Employee perceptions of fairness comprise factors influenced by employers' decisions across various aspects, as highlighted by Gelbrich & Roschk (2020). These decisions shape procedural and distributive justice within organizations. Luo (2019) stated that interactional justice occurs when organizational leaders provide justifiable feedback, display empathy, and treat individuals respectfully. Mikula et al. (1990) noted that perceptions of unfairness and injustice are more closely linked to interpersonal justice and treatment than procedural and distributive justice (Uzochukwu et al., 2024). These additional dimensions of justice perceptions reinforce Adams's (1963) equity theory, emphasizing that fairness is perceived as unfair when viewed as unjust (Adams, 1963).

Hypotheses development

Employee performance appraisal stands as a cornerstone in the effective functioning of organizations, not only to evaluate employee performance but also to job satisfaction and overall organizational effectiveness (Khan et al., 2019). In the distinct setting of the Bauchi State Teachers Service Commission in Bauchi state, Nigeria, the complexities of evaluating the performance of educators warrant careful examination. Teachers play a significance role in shaping the educational landscape, and understanding the complexity of their performance appraisal becomes imperative for fostering a conducive and thriving work environment. This study is propelled by examining the complex relationship of the employee performance appraisal system within Bauchi State Teachers Service Commission, explicitly investigating the mediating role of appraisal fairness in shaping the relationship between appraisal satisfaction and employee performance appraisal. In an educational institution where the quality of teaching directly impacts the development of future generations, comprehending the factors influencing performance assessment becomes crucial for educators and administrators.

Relationship between appraisal satisfaction and appraisal fairness

Previous research has consistently shown that a higher level of employee participation positively impacts the appraisal process, with greater rater acceptance resulting in increased appraisal satisfaction, motivation, and overall productivity. In the organizational context, the satisfaction derived from employee appraisals is important and closely linked to evaluating employee performance (Naeem et al., 2017). Several studies have shown that fairness in the appraisal process is crucial in employee performance appraisal exercises. Uzochukwu et al. (2024) explored the impact of performance appraisal fairness on employee productivity within Nigerian Federal Regulatory Agencies. They employed a descriptive survey research design, collecting primary data from NAFDAC staff using a five-point Likert scale questionnaire. Data analysis utilized correlation and regression techniques based on non-probability quota sampling. Their findings indicated that interactional, procedural, and distributive fairness in performance appraisals significantly and positively influenced employee productivity at NAFDAC.

The study suggests that government should create performance appraisal systems that effectively address these fairness constructs to enhance efficiency, accountability, and productivity in the public sector. This aligns with a similar study by Oghenevwegba (2024), which examined 89 Nigerian employees at MTN in Delta state. It found that the performance assessment method significantly affected employee performance in the telecom sector, recommending the provision of appropriate feedback while standardizing appraisal tools. Ameen and Baharom (2019) also investigated the impact of performance appraisal purposes on employee performance in the Nigerian civil service. Based on Vroom's expectancy theory, their conceptual literature review examined variables like feedback, recognition, training, job promotion, and financial rewards. The results indicated that performance appraisal feedback positively influences employee performance, contributing to organizational efficiency. In another study, Shah et al. (2022) analyzed the performance system's effects on employees at Pakistan Telecommunications Limited. They focused on employee productivity as the dependent variable and the performance assessment system as the independent variable. Their descriptive research utilized standardized questionnaires based on a five-point Likert scale, and data from 210 non-managerial staff were evaluated using Smart PLS 3 software. The results showed that the performance evaluation system became significantly more effective when employees were allowed to express their ideas and expectations regarding the company's strategic goals.

Furthermore, effective feedback was found to enhance employee productivity. Similarly, using a descriptive research design, Nvene et al. (2022) assessed the impact of performance appraisal on employee productivity in the Federal Civil Service in Abuja. They distributed structured questionnaires and used an ordinary least squares regression model to analyze the relationship between productivity (dependent variable) and employee feedback, performance-based rewards, and appraisal (independent variables). Their findings indicated that employee feedback significantly affects productivity and performance, recommending it as a prerequisite for appraisals. When dissatisfaction arises in the employee performance appraisal process, it can foster negative attitudes and perceptions, resulting in counterproductive outcomes for the organization, such as a poorly conducted appraisal process. The level of satisfaction with the performance appraisal hinges on the reciprocal relationship, particularly when employees perceive that the appraisal process is characterized by fairness, impartiality, and mutual benefit. In such instances, reciprocal positive responses will likely contribute to overall satisfaction with the appraisal exercise (Memon et al., 2021). Additionally, it has been argued that heightened levels of employee satisfaction with the outcomes of the appraisal process led to increased motivation and a reduced inclination to disengage from the organization.

H1: A positive relationship exists between appraisal fairness and employee performance appraisal in Bauchi State Teachers Service Commission (TSC).

Relationship between appraisal fairness and employee performance appraisal

Zahida and Sufiana (2022) conducted a study focusing on the influence of appraisal fairness on employee performance appraisal within the higher education sector. The research highlighted the close connection between the satisfaction of academicians and the appraisal process, emphasizing the importance of procedural fairness, outcomes, and the communication of system procedures. Employees' acceptance of the appraisal system was found to be contingent on their perception of fairness and satisfaction. This aligns with the findings of Olubukola and Pauline (2022) in their study on Performance Appraisal Fairness and Employees' Performance in the Nigerian Television Authority (NTA). Their research revealed a robust positive correlation between appraisal fairness and employees' performance appraisal. Furthermore, the study by Olubukola and Pauline (2022) recommended that NTA management ensure that their appraisal rating assessments consistently incorporate distributive, procedural, and interactional fairness to foster enhanced performance. This recommendation resonates with the concept that employee satisfaction, rooted in an effective and fair performance appraisal system, plays a significant role in propelling the organization towards heightened levels of success. Building on these insights, the first and the second hypotheses posited that:

H2: Appraisal Fairness significantly influences employee performance appraisal in Bauchi State Teachers Service Commission (TSC).

Relationship between appraisal satisfaction and employee performance appraisal

Numerous investigations have explored the correlation between attitudes toward supervisors and perceptions of fairness in employee performance appraisals. Notable studies by Landy et al. (1976) and Greenberg (1986) have highlighted the substantial impact of a supervisor's or appraiser's ability to accurately assess a subordinate's performance on perceptions of fairness. These studies suggest that when supervisors demonstrate competence in evaluation, employees are more likely to perceive the appraisal process as fair and just. Fulk et al. (1985) also emphasized the importance of maintaining open communication with the supervisor or appraiser. Effective communication fosters trust and contributes positively to outcomes, enhancing employees' perceptions of their performance evaluations. When supervisors engage in transparent dialogue about performance expectations and appraisal criteria, it can lead to a more supportive environment where employees feel valued and understood. These findings underscore the critical role of the supervisor-subordinate relationship and effective communication in shaping perceptions of fairness in performance appraisals. A strong, positive relationship between supervisors and their subordinates is foundational for creating an environment where constructive feedback and perceptions of equity are upheld.

Further reinforcing this perspective, a study conducted by Mokhtar et al. (2021) researched the mediating role of teachers' self-efficacy in the relationship between appraisal satisfaction and commitment. Involving a sample of 984 teachers and utilizing structural equation modeling, their research yielded significant findings illuminating this dynamic's complexities. The results indicated that self-efficacy was pivotal in the connection between teachers' commitment and satisfaction with the appraisal process. Specifically, when teachers believe in their capabilities, they are more likely to feel satisfied with their evaluation, which enhances their commitment to their roles. These findings support the importance of effective communication and the supervisor-subordinate relationship in shaping perceptions of fairness in performance appraisals. Understanding these dynamics is essential for organizations aiming to improve appraisal processes and employee engagement. Based on this foundation, the subsequent hypothesis is proposed:

H3: There is a significant relationship between appraisal satisfaction and employee performance appraisal in Bauchi State Teachers Service Commission (TSC).

Mediating relationship of appraisal fairness on the relationship between appraisal satisfaction and employee performance appraisal

In their research on the impact of organizational justice on employee performance, with organizational citizenship behavior acting as a mediator, Hermanto and Srimulyani (2022) employed a convenient sampling method to gather data from 820 teachers at high schools and vocational schools in Indonesia. They used structural equation modeling (SEM) and the Sobel test for data analysis, revealing that organizational justice significantly enhanced both employee productivity and organizational citizenship behavior at individual and organizational levels. Their results suggested that management can improve teachers' productivity by implementing organizational justice practices in the workplace. Taneja, Srivastava, and Ravichandran (2023) examined employees' perceptions of fairness regarding performance appraisal systems within the Indian banking sector. They collected data from 600 respondents using multiple hierarchical regressions, employing a multi-stage random sampling technique. Their findings indicated that the five-factor model of justice dimensions is more relevant than the three-factor model, with interpersonal justice being the most significant.

Additionally, they found that the validity of appraisal criteria significantly impacts perceptions of justice. While previous studies have focused on structural aspects of performance appraisal and its effects on employee productivity, there is a need for more research to identify critical psychological factors related to performance appraisal perceptions and their influence on productivity. Moreover, there are geographic gaps in the literature. However, some studies have addressed public sector employees at state and local levels; there has been limited focus on employees within federal regulatory agencies in Nigeria. Existing literature has highlighted the significance of fairness in performance appraisals when assessing employee performance (Malumba, 2021; Norfarizal, 2019; Olubukola & Pauline, 2022; Turner, 2020; Zahida & Sufiana, 2022). The examination of fairness within an employee appraisal system and its outcomes stems from the necessity for the system to be perceived as fair and equitable by employees for its effectiveness. Scholars such as Cardy & Dobbins (2019) argued that "feelings of unfairness in the appraisal process and inequity in measurement could lead to the failure of the appraisal." Lawler's (1967) findings prompted research in this domain, indicating that employees' beliefs about the fairness of a performance appraisal significantly influence the success of the appraisal, linked to confidence and acceptance of the system (Kavanagh et al., 2007).

H4: Appraisal fairness mediates the relationship between appraisal satisfaction and employee performance appraisal in Bauchi State Teachers Service Commission (TSC).

Research framework

The research framework presented in Figure 1 above was structured upon the foundation of existing literature, addressing the need for a comprehensive investigation into the complex relationships between the identified variables. Drawing on insights from studies by Buckner (2023), Zahida and Sufiana (2022),

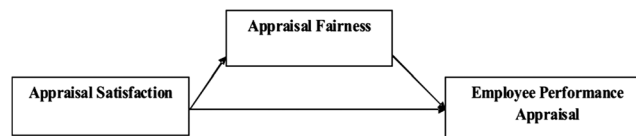


Figure 1. Proposed research framework with a mediating relationship between the dependent and independent variables.

Malumba (2021), and Rodrigues et al. (2023), the framework aims to delve deeper into the practical and contextual dimensions of the interconnections among the identified variables related to employee performance appraisal. This approach contributes to the existing body of knowledge, offering a more robust understanding of the dynamics influencing employee performance appraisal in diverse contexts. The subsequent sections outline the key components and variables within the research framework, providing a roadmap for empirically exploring the relationships identified in the literature review.

Methodology

This study investigates the mediating effect of appraisal fairness on the relationship between appraisal satisfaction and employee performance within Nigeria's Bauchi State Teachers Service Commission. Various data collection methods were employed to gather comprehensive information. Surveys and questionnaires were distributed among employees to capture their perceptions of appraisal fairness and satisfaction and their self-reported performance metrics. To address the research questions and objectives, a systematic approach was adopted, encompassing research design, data collection methods, and analytical procedures as presented below:

Sample and data collection

This research study employed a quantitative approach, utilizing a cross-sectional survey design to investigate the mediating effect of appraisal fairness on the relationship between appraisal satisfaction and employee performance among academic staff within the Bauchi State Teachers Service Commission (TSC). The focus on this specific population was deliberate; the Bauchi State TSC oversees many educators, making it an ideal case study to explore appraisal fairness, satisfaction, and performance in an educational context. The targeted population consisted of academic staff members from senior secondary schools operating under the Bauchi State TSC. According to statistical data obtained from the Ministry of Education in Bauchi State, the population was identified as comprising 5,016 academic staff members. This large and diverse population provides a rich context for examining the dynamics of performance appraisals and their perceived fairness among educators, who often face unique challenges in their professional evaluations. To ensure a robust representation of this population, a sample size of 371 participants was drawn using a probability cluster sampling technique. This method was chosen to minimize bias and ensure that various subgroups within the academic staff were adequately represented. Of the surveys distributed, 335 responses were deemed valid for analysis, allowing for reliable conclusions about the broader population. Data analysis was performed using Smart PLS Version 4, a sophisticated structural equation modeling tool that explores complex relationships among variables. A five-point Likert scale was employed to measure employee performance appraisal perceptions, offering respondents alternative responses for each statement (1 = Strongly Agree, 2 = Agree, 3 = Disagree, 4 = Neutral, and 5 = Strongly Disagree). This scale captures the nuances of respondents' perceptions and facilitates quantitative analysis of subjective experiences. Respondents were instructed to indicate their level of agreement with each statement, thereby providing insight into their perceptions of appraisal fairness and satisfaction (Saleh & Ryan, 1991). The Likert scale for all construct items is consistent with Babbie's (1990) recommendations, validating using a five-point scale as an effective tool for collecting meaningful data. The decision to focus on Bauchi State TSC as a case study was driven by several factors: its significant role in the region's educational landscape, the unique challenges educators face in performance evaluations, and the potential for findings to inform improvements in appraisal practices within similar educational institutions.

By examining this specific context, the study aims to provide solutions that can enhance the understanding of appraisal fairness and its implications for employee performance, ultimately contributing to more effective educational management strategies.

Measures

The measurement items regarding employee performance appraisal were adapted from the research conducted by (Giovanni & Lorenza, 2022; Norfarizal, 2019; Workagegnehu, 2021), which reported a Cronbach's alpha coefficient of 0.898. The dependent variable, consisting of seven (7) items labeled from PA1 to PA7, was assessed based on a five-point Likert scale. The measurement items regarding appraisal fairness were drawn from studies conducted by (Norfarizal, 2019; Olubukola & Pauline, 2022; Zahida & Sufiana, 2022), which reported a Cronbach's alpha coefficient of 0.881. As proposed by Zahida and Sufiana (2022), the mediator variable consists of seven (7) items labeled AF1 to AF7, to be assessed using a five-point Likert scale. The component related to appraisal satisfaction, considered as an independent variable in the research, was adopted from studies conducted by Norfarizal (2019; Al-bhaidani, 2022). This variable comprises seven (7) research measurement items labeled AS1 to AS7, which were assessed using a five-point Likert scale. It reported a Cronbach's alpha value of 0.888.

Tools for data analyses

The research study employed a sophisticated methodology for data analysis, leveraging advanced tools such as Smart PLS 4 to conduct structural equation modeling (SEM) and investigate the mediating role of Appraisal Fairness between the relationship of Appraisal Satisfaction and Employee Performance Appraisal. This study aims to delve into the intricacies of employee performance appraisal processes within the unique context of the Bauchi State Teachers Service Commission in Bauchi State, Nigeria. Complementing the use of Smart PLS 4, the research also harnesses the power of SPSS for data screening exercises, ensuring the quality and reliability of the dataset prior to conducting the primary analyses. This multifaceted analytical approach facilitates a comprehensive exploration of the complex relationships among variables, providing valuable insights into the dynamics of employee performance appraisal within the specified organizational setting. Through this rigorous analytical framework, the study aims to contribute meaningfully to the existing literature and inform practical strategies for enhancing appraisal processes in similar contexts.

Ethical statement

The data for this study were collected with the explicit consent of the participants, who voluntarily agreed to participate. According to Khan et al. (2019), it is crucial for researchers to handle all participant information with the highest level of confidentiality and to ensure that participants are thoroughly informed about the nature and purpose of the study. Ethical research practices include obtaining appropriate research clearance, securing informed consent from all participants, and protecting their privacy by anonymizing their data. In this study, the researcher strongly emphasized maintaining the confidentiality of participant information to build and maintain a trusting relationship with them. Instead of using participants' real names, the study used general terms such as 'respondents' and 'academic staff' to refer to them.

Consent statement

Informed consent was obtained from all participants before their involvement in the study. This process involved providing each participant with comprehensive information about the research's nature, purpose, and potential risks and benefits. Participants were allowed to ask questions and were assured of their right to withdraw from the study without any negative consequences. Only after receiving and understanding this information did participants formally consent to participate in the study.

Ethic and consent statement

This study was approved by the Research Ethic Committee of the Faculty of Management Science Sa'aduZungur University, Bauchi (SPGS/MBUS/0028), Dated December 2023).

Result and discussion

In this section, we present and analyze the findings from our investigation into the mediating effect of appraisal fairness between the relationship of appraisal satisfaction and employee performance within the Bauchi State Teachers Service Commission. The results are first outlined to provide a clear view of the data collected, followed by a detailed discussion that interprets these findings in the context of existing literature and theoretical frameworks. The results section details the critical statistical outcomes using the SmartPLS 4.0 version. We then move to the discussion section, where we interpret these results, explore their implications for theory and practice, and consider their relevance to the broader context of performance appraisal systems. This section aims to provide a comprehensive understanding of how appraisal fairness influences the relationship between appraisal satisfaction and employee performance and to offer constructive recommendations for improving appraisal practices in educational settings.

Demographic profile of the respondent

The analysis of demographic data from the respondents revealed several key findings. Firstly, most participants were male, comprising 89.9% of the total respondents. Additionally, the majority fell within the age range of 30–39 years, constituting 93.1% of the sample. Moreover, a substantial proportion of respondents were married, accounting for 88.1% of the participants. Regarding educational attainment, most respondents were graduates, comprising 78.8% of the academic staff included in the study. Further examination of the data showed that out of the total 335 respondents, 171 individuals, constituting 51% of the sample, were staff members with the highest level of work experience in the selected schools. This demographic profile offers valuable insights into the characteristics of the study participants and their potential implications for the research findings. For instance, the predominance of male respondents may indicate gender disparities within the academic staff population, which could influence perceptions and experiences related to performance appraisal. Similarly, the high proportion of respondents within the 30–39 age bracket may suggest a specific generational perspective on performance evaluation processes. Moreover, the significant number of married respondents could imply potential family-related responsibilities and commitments that may impact their perceptions and experiences with performance appraisal. Additionally, the prevalence of graduate respondents highlights the educational background of the academic staff involved in the study, which could influence their understanding and engagement with performance evaluation practices. Furthermore, the concentration of respondents with the highest level of work experience underscores the importance of considering tenure and expertise when analyzing perceptions of performance appraisal. Overall, these demographic characteristics provide valuable context for interpreting the research findings and understanding the significant factors influencing employee perceptions and experiences with performance appraisal systems.

The demographic data in [Table 1](#) above revealed that most respondents were male (89.9%), and most fell within the 30–39 age brackets (93.1%). The most considerable portion of respondents was married (88.1%), and a significant number were graduates (78.8%) among the academic staff selected for the study. Out of the 335 respondents, 171 (51%) were staff members with the highest level of work experience in the chosen schools. A summary of the demographic descriptive statistics for the respondents and the implication of the respondent profile is outlined in [Table 1](#) as presented.

Data analysis

The researchers distributed 371 survey questionnaires to the participants to gather insights into employee performance appraisal among academic staff. Impressively, 335 completed surveys were returned, resulting in a robust response rate of 90.32%. However, 30 questionnaires (8.08%) remained

Table 1. Demographic summary of the respondents.

Demographic	Category	Frequency	Valid percentage
Gender	Male	301	89.9
	Female	34	10.1
Age	30–39	312	93.1
	40–49	23	6.9
Marital status	Single	40	11.9
	Married	295	88.1
Qualification	NCE	71	21.1
	First Degree	264	78.6
Work experience	1–5	79	23.6
	6–10	171	51.0
	11–15	85	25.4
Position	Academic	335	100

un-retrieved for various reasons, while six questionnaires (1.6%) were excluded from the analysis due to missing essential information. To evaluate the model's predictive capability, the researchers employed Partial Least Squares (PLS) Structural Equation Modeling Version 4, utilizing the Cross Validation Predictive Assessment Test (CVPAT) approach as recommended by Hair et al. (2022). Additionally, the study utilized Important Performance Matrix Analysis (IPMA) to assess the significance and performance of each research construct. This comprehensive methodological approach aimed to provide a thorough analysis of the relationships and factors influencing employee performance appraisal among academic staff within the specified context. The analysis, therefore, primarily focused on the collected questionnaires, which were meticulously scrutinized to extract meaningful insights.

Additionally, leveraging Smart PLS 4.0 software, the researchers meticulously analyzed the data and presented the findings with meticulous detail and clarity. This rigorous methodology ensures the reliability and validity of the study's findings, enabling stakeholders to make informed decisions based on robust empirical evidence. The robust response rate underscores a profound level of engagement and enthusiasm among the academic staff, thereby bolstering the credibility and applicability of the research outcomes. This high level of participation suggested that the findings are reliable and have broader relevance and validity beyond the specific context of the study. Furthermore, the adoption of advanced statistical techniques such as PLS predicts, and IPMA signified the study's methodological rigor and sophistication, enhancing the quality and reliability of the research outcomes. Overall, the meticulous approach to data collection, analysis, and presentation demonstrated the significance and reliability of the study's findings, paving the way for informed decision-making and further research in employee performance appraisal among academic staff.

Measurement model

Following the recommendation of Hair et al. (2022) & Wong (2019), the measurement model assesses the constructs' quality criteria. Similarly, before proceeding with the evaluation of path coefficients within the structural model, as suggested by Wong (2019), it is crucial for the research study first to examine the indicator reliability (Outer loadings), internal consistency reliability (Composite reliability), convergent validity, and discriminant validity of the reflective measurement model. This verification process is essential to ensure these components adhere to acceptable standards. Expanding upon this, evaluating the quality criteria of the constructs entails a meticulous examination of various facets, such as the reliability and validity of the measurement instruments employed. By scrutinizing the outer loadings, researchers can ascertain the strength of the relationship between each indicator and its respective latent construct.

Additionally, assessing the composite reliability provides insights into the internal consistency of the measurement model, indicating the extent to which the items reliably measure the underlying construct. Convergent validity assessment involves examining the extent to which multiple indicators of the same construct converge. On the other hand, discriminant validity analysis using HTMT seeks to ensure that each construct is distinct from others in the model, thereby preventing issues such as multicollinearity. By rigorously evaluating these components of the reflective measurement model, researchers can establish a robust foundation for subsequent analyses within the structural model. This methodological

approach ensures the validity and reliability of the research findings, ultimately enhancing the credibility and trustworthiness of the study outcomes. Several key parameters were examined in evaluating the measurement model, including loadings, average variance extracted (AVE), and composite reliability (CR). It is recommended that loadings ideally surpass 0.5, while AVE and CR should exceed 0.5 and 0.7, respectively, to ensure the robustness of the model (Hair et al., 2022). As depicted in Table 2, the AVE values surpassed the threshold of 0.5, indicating adequate convergent validity.

Moreover, the CR values exceeded 0.7, signifying satisfactory internal consistency reliability. Additionally, the loadings were generally acceptable, with only a few instances where one loading fell slightly below the recommended threshold of 0.7 and was ultimately deleted from the model. Expanding on this, examining loadings provides insights into the strength of the relationship between each indicator and its corresponding latent construct. AVE assessment gauges the variance the construct captured relative to measurement error. At the same time, CR (Composite Reliability) evaluates the reliability of the measurement model by assessing the internal consistency of the items measuring each construct. These findings affirm the validity and reliability of the measurement model, ensuring that it accurately captures the constructs under investigation. By meeting these criteria, researchers can confidently analyze the structural model, knowing that the measurement model adequately represents the underlying theoretical constructs.

The study's results, as presented in Table 2 above unveiled that, composite reliability for employee performance appraisal stands at 0.900, complemented by an average variance extracted (AVE) of 0.656. In the case of appraisal fairness, the composite reliability is measured at 0.916, with an associated average variance extracted (AVE) of 0.683. Furthermore, appraisal satisfaction demonstrates a composite reliability of 0.900, accompanied by an average variance extracted of 0.652. These findings (Table 2) collectively indicate that the model exhibits a satisfactory level of composite reliability and average variance extracted, surpassing the recommended threshold of 0.5, as advocated by Wang et al. (2021). Composite reliability indicates the internal consistency and reliability of the measurement model, with higher values signifying greater reliability. In this context, the values obtained for employee performance appraisal, appraisal fairness, and appraisal satisfaction suggest robust internal consistency within the measurement model. Additionally, the average variance extracted (AVE) values provide insights into the amount of variance captured by the latent constructs in relation to the measurement errors, reinforcing the robustness of the model. These results affirm the soundness of the research methodology and the reliability of the measurement instruments employed, further enhancing the credibility and validity of the study. The adherence to recommended thresholds indicated that the model effectively captures and measures the underlying constructs, laying a solid foundation for drawing meaningful conclusions and implications from the research findings.

Table 2. Measurement model path coefficient.

Constructs	Indicators	Loadings	CR	AVE
Performance appraisal	PA1	0.864	0.900	0.656
	PA2	0.831		
	PA3	0.775		
	PA4	0.797		
	PA5	0.815		
	PA6	0.699		
	PA7	0.735		
Appraisal fairness	AF1	0.739	0.916	0.683
	AF2	0.824		
	AF3	0.916		
	AF4	deleted		
	AF5	0.797		
	AF6	0.851		
	AF7	0.820		
Appraisal satisfaction	AS1	0.589	0.900	0.652
	AS2	0.836		
	AS3	0.841		
	AS4	0.835		
	AS5	0.806		
	AS6	0.743		
	AS7	0.744		

Discriminant validity

The HTMT (Heterotrait-Monotrait) ratio of correlations is used to assess discriminant validity in a structural equation modeling (SEM) context. It compares the correlations among different constructs to evaluate if they are significantly different from each other. Researchers, therefore, must ensure that all constructs within a model are distinctly different from one another to establish discriminant validity (Kock, 2020). If discriminant validity is lacking, it raises doubts about the reliability of the conclusions drawn from the data, questioning whether results are genuinely supported or if they arise due to using a construct redundantly in the model. The HTMT values should ideally be below a threshold of 0.85 (Hair et al., 2022) to confirm discriminant validity. These analyses will provide the specific results needed to determine whether the HTMT values meet the criteria for discriminant validity. Similarly, there exist two approaches for evaluating discriminant validity using the Heterotrait-Monotrait Ratio of Correlations (HTMT): comparing it against threshold values of either 0.85 or 0.9 (Henseler et al., 2015; Kock, 2020) and conducting inference statistics to test the hypothesis that HTMT equals 1 (Sarstedt et al., 2022). The HTMT value should be lower than 0.85 or 0.9 to meet the suggested thresholds. Meanwhile, the hypothesis that HTMT equals 1 must be rejected when employing inference statistics. Therefore, in this study, the HTMT ratios for all constructs demonstrate values lower than 0.85, confirming the presence of discriminant validity as presented in Table 3 below:

This study calculated and examined the Heterotrait-Monotrait ratio of correlations (HTMT) for each construct, as presented in Table 3 above. The calculated HTMT ratios for all constructs were below the critical threshold of 0.85, as Kock (2020) suggested). This outcome confirms that the measures used for different constructs in the study are more highly correlated with their constructs than other constructs in the model. Therefore, it supported the argument that the constructs represent distinct concepts or variables and are not merely overlapping or redundant, indicating the presence of discriminant validity among the measured constructs in this study.

Structural model

The structural model presents the interconnections between exogenous and endogenous variables obtained through path coefficients using bootstrapping techniques or procedures (Hair et al., 2022). A comprehensive analysis was conducted through a total of 5,000 bootstrapping repetitions to scrutinize hypotheses concerning direct, indirect, and mediating relationships. This complex process entailed drawing numerous subsamples, with replacements, from the original dataset to establish bootstrapping standard errors. These errors approximate the T-value utilized for significance testing within the structural path model. Furthermore, the assessment encompassed the evaluation of the Coefficient of determination (R^2) and effect size (f^2), crucial metrics for gauging the explanatory power and practical significance of the model.

Additionally, the PLS predicts algorithm was leveraged to validate the Cross Validation Predictive Assessment Test (CVPAT), aiming to ascertain the model's predictive capability and robustness in real-world scenarios. Expanding on this, the Coefficient of determination (R^2) provides insights into the proportion of variance in the endogenous variables explained by the exogenous variables in the model. Meanwhile, effect size (f^2) helps in understanding the practical significance of the relationships between variables by assessing the relative contribution of each predictor variable to the variance in the outcome variable. The utilization PLS predicts algorithm ensures that the model's predictive performance is rigorously evaluated, thereby enhancing its applicability in practical settings.

Table 3. HTMT: (Heterotrait-Monotrait).

	AF	AS	PA
AF	0.734		
AS	0.761	0.776	
PA	0.676	0.810	0.725

Source: Field work PLS 2023.

Discussion of findings

The primary objective of this study was to examine the relationship between appraisal satisfaction and appraisal fairness, drawing upon equity theory and organizational justice theory. As illustrated in Table 4, the results strongly support the first alternate hypothesis. The observed T-value of 6.193 and a *P*-value of 0.000, which is significantly below the threshold of 0.05, confirms a statistically significant relationship between these constructs. This finding reinforces the principles of equity theory, which posits that individuals evaluate their job satisfaction based on the perceived fairness of rewards and outcomes concerning their contributions. When employees perceive that appraisal processes are fair, their satisfaction levels rise, affirming the core tenets of equity theory. Furthermore, these results are consistent with Zahida and Sufiana (2022) research, which demonstrated that satisfaction is closely linked to procedural fairness and outcomes in the higher education sector. Zahida's findings indicate that employees who perceive fairness in the appraisal process are likelier to report higher satisfaction levels. Similarly, the study by Olubukola and Pauline (2022) supports this relationship, revealing a strong positive correlation between appraisal fairness and satisfaction with appraisals. These studies collectively signified the importance of organizational justice theory (Hermanto & Srimulyani, 2022), which emphasizes the significance of fair treatment and transparent processes in shaping employee attitudes and behaviors. The implications of these findings are significant for organizations such as Bauchi State Teachers Service Commission (TSC) and similar educational institutions. Ensuring fair appraisal rating assessments is essential for enhancing both employee satisfaction and performance (Ebegbetale et al., 2023). Organizations are advised to implement comprehensive training programs for evaluators to enhance their understanding of fairness and equity in appraisal processes (Uzochukwu et al., 2024). This can lead to more accurate evaluations and foster a culture of trust and openness. Moreover, the findings suggest that organizations should prioritize procedural fairness, ensuring employees understand the criteria and processes involved in performance evaluations (Lin et al., 2024). Transparent communication about appraisal processes promotes trust and empowers employees to engage actively with the evaluation system. This aligns with the principles of organizational justice, emphasizing that employees who perceive fairness in evaluations are more likely to be committed and motivated. The study's results, particularly the second alternate hypothesis, demonstrate a positive significant relationship between appraisal fairness (AF) and employee performance appraisal (PA), as indicated by a T-value of 5.941 and a *P*-value of 0.000. With a 95% confidence level and a critical value of 1.96, the confidence interval for this relationship is estimated to be [0.256, 0.510]. This suggests that we can be 95% confident that the true effect size lies within this range, reinforcing the notion that appraisal fairness substantially impacts employee performance evaluations (Ebegbetale et al., 2023). These findings are closely aligned with equity theory and organizational justice theory. Equity theory posits that individuals assess fairness based on the ratio of their inputs (effort, skills, etc.) to their outcomes (rewards, recognition). When employees perceive appraisal fairness, they will likely feel that their contributions are appropriately recognized, enhancing their performance. Organizational justice theory further emphasizes that employees evaluate fairness in terms of outcomes and the processes used to arrive at those outcomes. The positive correlation found in this study suggests that when employees perceive the appraisal process as fair both procedurally and distributively, they are more likely to be motivated and perform better. The implications of these results are significant for organizations aiming to enhance employee performance through fair appraisal practices. Specifically, organizations should

Table 4. Hypotheses testing of the direct relationship.

Hypotheses	R/Ship	Beta	STDEV	T-Value	P-value	Confidence Interval		Decision
						Lower	Upper	
H1:	AS -> AF	0.346	0.056	6.193	0.000	0.237	0.455	Supported
H2:	AF -> PA	0.383	0.065	5.941	0.000	0.256	0.510	Supported
H3:	AS -> PA	0.157	0.053	2.987	0.003	0.053	0.261	Supported
H4:	AS ->AF->PA	0.055	0.021	2.679	0.007	0.014	0.09	Supported

*R*² 0.810: level of significance.

***p* < 0.05.

Source: Field Work 2023 Smart.

PA: Performance Appraisal, AF: Appraisal Fairness, AS: Appraisal Satisfaction.

prioritize fairness in their performance appraisal processes. This involves ensuring that appraisal criteria are transparent, consistently applied, and deemed equitable by employees. Providing training for supervisors on conducting fair appraisals can improve their ability to evaluate employee performance accurately, fostering a sense of trust and fairness. Establishing open channels for feedback and communication regarding appraisals can help employees feel heard and valued, further enhancing their satisfaction and performance (Uzochukwu et al., 2024). Organizations should communicate the link between fair appraisals and tangible outcomes, such as promotions or rewards, to reinforce the importance of fairness in their appraisal systems. By addressing these areas, organizations can cultivate a more motivated and high-performing workforce, ultimately leading to better performance outcomes. The findings support Zahida and Sufiana (2022) research, which highlighted the strong association between academic satisfaction with performance appraisals and procedural fairness and outcomes, suggesting that these principles are universally applicable across various contexts. Likewise, the third hypothesis, which suggested a positive significant relationship between appraisal satisfaction (AS) and employee performance appraisal (AP), was equally supported. This was evidenced by a T-value of 2.987 and a corresponding P-value of 0.003 obtained from the analysis, as shown in table 4.4 above. The 95% confidence interval for the relationship between appraisal satisfaction and appraisal fairness, with a critical value of 1.96, is calculated as [0.053, 0.261] as presented in Table 4. This indicated that we can be 95% confident that the true effect size lies within this interval. The positive range suggests a statistically significant positive association, providing evidence that higher levels of appraisal satisfaction are likely associated with improved appraisal fairness. Therefore, with the T-value exceeding the specified significance threshold of 1.96 at a 95% confidence interval (two-tailed), the alternate hypothesis regarding the relationship between the constructs was affirmed. This outcome further supports the findings of Rodrigues et al. (2023), demonstrating a positive and significant relationship between satisfaction with appraisals and fairness to employee performance appraisal exercise. The finding also signified a substantial positive correlation between the effectiveness and precision of performance appraisals and employee satisfaction. The findings align with the work of Wakwoya (2020) on the correlation between appraisal practices and Teachers' appraisal satisfaction in government Secondary Schools. The data analysis involved techniques such as simple percentages, means, standard deviation, analysis of variance, and Pearson correlation, indicating a notably positive correlation between human resource management and teachers' appraisal satisfaction ($r=0.55$, $p=0.000$). The research study illustrated that appraisal satisfaction significantly influences employee performance appraisal. Moreover, the indirect effect between appraisal satisfaction (AS) and employee performance appraisal (PA) was observed to be both positive and significant ($\beta=0.055$, $T=2.679$, $p=0.007<0.05$) (Table 4) with a T-value surpassing 1.96. With a 95% confidence interval and a critical value of 1.96, the indirect relationship of appraisal fairness between appraisal satisfaction and employee performance appraisal was estimated to fall between 0.014 and 0.096 as presented in Table 4. This suggests that we can be 95% confident that the true indirect effect lies within this interval, providing a range within which the actual impact is likely to occur. The positive values indicate a potentially positive influence of appraisal fairness on the relationship between appraisal satisfaction and employee performance appraisal. The alternate hypotheses concerning the indirect relationships were confirmed as significant and positive. This aligns with Cardy & Dobbins (2019) study, which highlighted a strong positive relationship between appraisal fairness and the level of two-way communications within an organization. The fourth objective of the study was to investigate the mediating effect of appraisal fairness between appraisal satisfaction and employee performance appraisal within the Bauchi State Teachers Service Commission (TSC). The analysis indicated a positive and significant relationship, with results showing a beta coefficient (β) of 0.383, a T-value of 5.941, and a P-value of 0.000, less than the 0.05 threshold for significance. This high T-value, exceeding the critical value of 1.96, validates the alternate hypothesis, suggesting that appraisal fairness is a strong predictor of employee performance appraisal in this context. Moreover, the findings revealed a moderate mediating effect, supported by a variance account for (VAF) result of 53.9%. This means that over half of the effect of appraisal satisfaction on employee performance appraisal is mediated through appraisal fairness, highlighting its crucial role in the appraisal process. Such findings resonate with the research conducted by Mokhtar et al. (2021), which demonstrated the mediating role of teachers' self-efficacy in the relationship between appraisal satisfaction and commitment. This parallel emphasizes the importance of various mediating factors in enhancing the

effectiveness of performance appraisals. The results of this study align closely with equity theory and organizational justice theory. Equity theory, introduced by John Stacey Adams in the 1960s, focuses on balancing an employee’s inputs (such as effort and skills) and outcomes (such as rewards and recognition). In this study, appraisal fairness is vital in ensuring that employees perceive their performance evaluations as equitable. When employees believe that the appraisal process fairly considers their contributions, they are more likely to feel satisfied and motivated to perform well (Uzochukwu et al., 2024). As Locke (1976) suggested, employees who perceive their compensation and recognition as fair are generally more motivated, reinforcing the link between appraisal fairness and employee performance. Organizational justice theory further expands on this by highlighting the importance of fairness in the processes and outcomes of evaluations. This theory posits that employees assess the fairness of the appraisal process itself, not just the results (Venkateswaran et al., 2023). The positive mediation effect of appraisal fairness suggests that when teachers feel satisfied with how their appraisals are conducted, they are likely to demonstrate higher performance. This is particularly relevant in educational settings, where fairness and transparency in appraisals can significantly impact educators’ commitment and effectiveness. The implications of these findings are substantial for the Bauchi State TSC and similar organizations. The results indicate a need for the TSC to prioritize appraisal fairness. Implementing transparent processes and evaluation criteria can enhance teachers’ perceptions of fairness. Providing training for appraisers on conducting fair and unbiased appraisals can improve the accuracy and acceptance of performance evaluations. Establishing mechanisms for open dialogue about appraisal processes can help address concerns and clarify expectations, leading to greater appraisal satisfaction. Communicating how appraisal results affect promotions, rewards, and professional development can enhance employees’ motivation and performance. By focusing on these areas, organizations can cultivate a more positive appraisal environment that boosts employee satisfaction and enhances overall performance. The study’s findings affirm the critical role of appraisal fairness within the broader equity and organizational justice frameworks, suggesting that organizations that invest in fair appraisal practices will likely see improved employee outcomes. Moreover, to examine the strength of the relationship (mediation), the study utilized total effect and variance account for (VAF) (Hair et al., 2019). VAF was determined by dividing the result of the indirect effect by the total effect. VAF less than 0.2 signified no mediation, VAF between 0.2 and 0.8 indicates partial mediation, and VAF exceeding 0.8 indicates full mediation (Hair et al., 2019).

The bootstrapping results from the mediation analysis concerning the second hypothesis indicate that the total effect of the relationship between appraisal satisfaction (AS) and employee performance appraisal (PA) is significant ($\beta=0.102$, T-value = 2.000 > 1.96). The indirect effect ($\beta=0.055$, T-value = 2.679 > 1.96), as presented in Table 5 above, exhibits a significant T-value at 95% confidence level (Table 5). However, the variance account for (VAF) indicates a value of 53.9%, suggesting the presence of moderately partial mediation among the constructs (Hair et al., 2019). Consequently, research on how appraisal fairness mediates the relationship between appraisal satisfaction and performance, particularly within Nigeria’s public sector, is still scarce (Uzochukwu et al., 2024). A study by Hermanto and Srimulyani (2022) investigated the role of organizational justice in performance appraisals, with organizational citizenship behavior serving as a mediator. Using a convenient sampling method, they collected data from 820 teachers in Indonesian high schools and vocational institutions. Through structural equation modeling (SEM) and the Sobel test, their findings indicated that organizational justice significantly boosts employee productivity and encourages organizational citizenship behavior, yielding positive outcomes for both individuals and the organization. This suggests that implementing fair organizational justice practices can effectively enhance teacher productivity. In a parallel study, Taneja,

Table 5. Mediation Analysis (H2: AS ->AF-> PA).

Type of effect		Beta	T-value	Remarks	
Total effect	AS -> PA	0.102	2.000	Sig Total Effect	
Indirect effect	AS ->AF-> PA	0.055	2.679	Sig Indirect Effect	VAF
IE/TE	53.9%				
Conclusion	Moderately partial mediation exists				

AS: Appraisal Satisfaction, PA: Employee Performance Appraisal, AF: Appraisal Fairness, VAF: Variance Account For. IE: Indirect Effect, TE: Total Effect.

Srivastava, & Ravichandran (2023) explored fairness perceptions of performance appraisal systems in the Indian banking sector. They analyzed data from 600 respondents using multiple hierarchical regressions and a multi-stage random sampling approach. Their results indicated that a five-factor model of justice dimensions is more relevant than a three-factor model, with interpersonal justice being particularly significant. They also found that the perceived validity of appraisal criteria is crucial in shaping justice perceptions. While these studies provide valuable insights, they predominantly address structural factors affecting performance appraisal perceptions and employee productivity. There is an urgent need for more research focusing on the mediating role of appraisal fairness, especially within the public sector in Nigeria. Most existing studies have centered on private sector employees, leaving a notable gap in understanding the specific dynamics within public institutions. The implications of these findings are profound. Recognizing the mechanisms of appraisal fairness could significantly enhance performance management strategies in the public sector. By integrating psychological elements related to fairness in performance appraisals, organizations can create a more engaged workforce, which is essential for improving productivity and morale (Collins, 2021; Lyu et al., 2023; Uzochukwu et al., 2024; Wang et al., 2021). Additionally, addressing the geographic gap in research could yield insights tailored to the unique challenges faced by public sector employees in Nigeria, allowing for interventions that are better suited to their needs. Overall, a comprehensive understanding of appraisal fairness not only has the potential to elevate individual performance but can also lead to greater overall effectiveness and efficiency within Nigeria's public sector organizations. By fostering a culture of fairness and transparency, public institutions can build trust and commitment among employees, ultimately contributing to improved service delivery and organizational success.

Assessment of coefficient of determination, effect size, and Q square

Coefficients of determination demonstrate the extent to which the exogenous constructs collectively contributed to the model's capability to elucidate the variances in the endogenous construct (Wong, 2019). In line with this, Hair et al. (2022) proposed a threshold of 0.25, 0.5, and 0.7 to signify weak, moderate, and strong coefficients of determination. Consequently, the overall coefficient of determination for the endogenous construct (0.810) was deemed vital, signifying that the three constructs could explain 81% of the variance in the endogenous construct. Similarly, the study examined the effect of exogenous variables on the endogenous construct using f statistic, as presented in Table 6 below.

Following Cohen's (1988) guidelines, f^2 values of 0.02, 0.15, and 0.35 represent small, medium, and large effect sizes, respectively. Additionally, as recommended by Shmueli et al. (2016); Sharma et al. (2023), to further substantiate the predictive significance of the model, the Q^2 decision criteria were employed. This approach involved comparing the Q^2 values of the endogenous and intervening variables with the predictive benchmark criteria proposed by Stone & Geisser (1974). According to Shmueli et al. (2016), Q^2 values >0.2 indicate low predictive power, while Q^2 values >0.25 suggest medium predictive power, and Q^2 values >0.5 represent high predictive relevance. Upon evaluating the Q^2 values of the endogenous and intervening constructs, the results indicated strong predictive power for both employee performance appraisal (Q^2 value of 0.874) and appraisal fairness (Q^2 value of 0.782) (Table 6). These values surpass 0.5, signifying a high predictive power of the model, as presented in Table 6 above.

Conclusion

The research study was carried out with a primary focus on examining the mediating effect of appraisal fairness between the relationship between appraisal satisfaction and employee performance appraisal within Bauchi State Teachers Service Commission (TSC). The study's outcomes

Table 6. Coefficient of determination, effect size and Q square.

	R^2	f^2	Q^2
PA	0.810		0.874
AF	0.805	0.355	0.782
AS		0.365	

revealed a positive and significant correlation between appraisal satisfaction and employee performance appraisal, directly and indirectly, through the mediating role of appraisal fairness. These findings suggest that Bauchi State (TSC) implements effective employee performance appraisal practices, thereby highlighting the importance of fostering fairness in the appraisal process. The implications of these findings are substantial for the Bauchi State TSC, offering valuable contributions to enhance human resource practices, particularly in the evaluation and assessment of performance appraisal within the commission. Policymakers, academic staff, and the commission's management can benefit significantly from these research outcomes in their efforts to optimize organizational effectiveness and employee performance. The study contributed to the field theoretically by shedding light on the distinct significance of employee performance appraisal within the specific context of the Bauchi State TSC. It also contributes methodologically by employing robust research methods to investigate the mediating effect of appraisal fairness.

Implications of the study

The research study examined the mediating effect of appraisal fairness between the relationship of appraisal satisfaction and employee performance appraisal in Bauchi State Teachers Service Commission (TSC), presenting a spectrum of implications crucial for both practical applications and theoretical understanding. Understanding the implications, these relationships hold significant value for the commission's operational strategies and the broader realm of organizational psychology and management theories. Various key aspects that influence the efficacy of employee performance appraisals can be explored by examining the implications arising from this research.

Theoretical contributions

It is a well-known fact that Equity theory posits that employees assess their input-output ratios in comparison to others within their organization (Kelly et al., 2021). When employees perceive inequity in terms of effort, recognition, or rewards, they may experience dissatisfaction, leading to decreased motivation and performance (Fallon et al., 2022). The findings of this research align closely with this theory, highlighting that employees' perceptions of fairness in the appraisal process directly influence their appraisal satisfaction (Lyu et al., 2023; Uzochukwu et al., 2024; Venkateswaran et al., 2023; Vidè et al., 2023). Employees who believe that the appraisal system is just and equitable are more likely to feel satisfied and motivated, enhancing their performance (Lyu et al., 2023). The research study reveals that appraisal fairness is a crucial mediator between appraisal satisfaction and employee performance. This mediating effect reflects the principles of organizational justice theory, which emphasizes the importance of fairness in processes (procedural justice) and outcomes (distributive justice) (Lin et al., 2024). When employees perceive the appraisal process as fair, they are more likely to feel satisfied with their evaluations, reinforcing their commitment to organizational goals (Lyu et al., 2023). This relationship suggests that organizations must prioritize transparent and fair appraisal practices to foster a culture of trust and satisfaction among employees (Uzochukwu et al., 2024). Understanding the role of appraisal fairness in shaping employee perceptions can inform strategic decisions within the Bauchi State Teachers Service Commission. Organizations can enhance employee satisfaction and performance by integrating the principles of equity and organizational justice into performance appraisal systems (Venkateswaran et al., 2023). This approach improves individual outcomes and contributes to a more positive organizational climate. Training evaluators on the importance of fairness and implementing structured feedback mechanisms can help ensure that appraisals are perceived as equitable, thereby reinforcing employee motivation and commitment. The implications of this study extend beyond immediate operational strategies. They contribute to the broader discourse in organizational psychology by reinforcing that fairness is a fundamental component of effective management (Lyu et al., 2023; Venkateswaran et al., 2023). By highlighting the relationship between appraisal fairness, satisfaction, and performance, this research invites further investigation into how organizations can create equitable environments that support employee well-being and productivity.

Practical implications

The findings of this study highlighted the necessity for Bauchi State Teachers Service Commission to adopt strategies that enhance and improve fairness and transparency of the appraisal process carried out within the Commission—drawing from equity theory (Fallon et al., 2022; Lyu et al., 2023), ensuring that employees perceive their evaluations as just. This can be achieved by developing clear guidelines that outline the appraisal criteria making expectations transparent. Such measures can help employees understand how their contributions are assessed, aligning their perceptions of input-output ratios with their peers. To mitigate biases in evaluations, the research underscores the need for targeted training programs for supervisors. These programs should promote unbiased, consistent evaluations, reinforcing procedural justice, a key aspect of organizational justice theory. The commission can foster a culture of fairness that resonates throughout the organization by equipping supervisors with the skills to conduct fair assessments and deliver constructive feedback. Training can also address potential biases, enabling supervisors to recognize and rectify them, ultimately enhancing employee trust in the appraisal process. Creating an environment that prioritizes fair appraisal procedures is vital for enhancing employee morale, performance, and overall satisfaction (Fallon et al., 2022; Lyu et al., 2023). The findings suggest that when employees perceive the appraisal system as equitable, they are more likely to engage positively with their work and exhibit higher performance levels. This aligns with organizational justice theories, which posit that perceived fairness in organizational processes improves employee attitudes and behaviors. The commission can cultivate a supportive workplace culture by institutionalizing practices that reinforce fairness, such as regular audits of appraisal processes and open channels for employee feedback.

Moreover, the significance of appraisal satisfaction, as indicated by the research findings, indicates the need for personalized feedback mechanisms. Tailored feedback systems allow supervisors to address individual employee concerns and aspirations, enhancing satisfaction. This aligns with the principles of equity theory, where employees are motivated not only by outcomes but also by the perceived fairness of the processes leading to those outcomes. Providing avenues for employees to voice their concerns and receive personalized responses fosters a sense of belonging and respect, further strengthening their commitment to the organization. The research findings offer valuable insights that can transform the operational framework of the Bauchi State Teachers Service Commission by aligning practices with established organizational theories. The commission can significantly enhance employee morale and performance by prioritizing fairness, transparency, and personalized feedback within the appraisal process. These strategies reflect a commitment to equity and justice and position the commission as a progressive entity focused on the well-being of its academic staff, ultimately contributing to a more effective educational environment.

Limitations and suggestions for future research

The research utilized a probability cluster sampling technique, which, while statistically robust, may still introduce biases. The population was drawn from academic staff at senior secondary schools within the Bauchi State TSC, amounting to 5,016 members. The sample size of 371 and the valid responses from 335 participants might not adequately represent the entire population. This could skew the results if specific clusters were overrepresented or underrepresented, such as schools with differing performance levels or staff demographics. The findings may not accurately reflect the appraisal satisfaction and employee performance across all schools within the state, limiting the generalizability of the conclusions drawn. The use of a five-point Likert scale (1 = Strongly Agree to 5 = Strongly Disagree) can also lead to response bias. Participants may exhibit social desirability bias, responding in ways they perceive as favorable rather than expressing true feelings, especially regarding sensitive topics like performance appraisal. This is compounded by a tendency to favor neutral responses, which may obscure actual sentiments about appraisal fairness and satisfaction. Moreover, appraisal satisfaction, fairness, and employee performance constructs need to be clearly defined and relevant to the local context. If survey items are not culturally appropriate for Bauchi State, measurement bias could arise. Data analysis using Smart PLS Version 4 is practical, but reliance on a single software package could introduce limitations

if model assumptions are violated. The study's cross-sectional design restricts causal inferences, as it captures data at a single point in time. Changes in external factors, like educational policy or economic conditions, could further affect results, leading to misinterpretations. Future research should also employ more representative sampling, ensure cultural relevance in measurement, and consider longitudinal designs.

Additionally, diverse data collection methods, such as interviews or objective metrics, can provide a more comprehensive understanding of variable relationships and improve validity and reliability. Additionally, longitudinal study designs could illuminate causal relationships over time, revealing how fluctuations in factors like appraisal satisfaction and fairness impact employee performance appraisal outcomes. Furthermore, employing a mixed-methods approach, including qualitative techniques such as interviews or focus groups, could uncover the underlying mechanisms connecting appraisal satisfaction, fairness, and performance appraisal. Expanding the scope to include cross-cultural comparisons would provide valuable perspectives on how cultural dynamics influence perceptions and reactions to performance appraisal processes. Moreover, moderator analyses exploring factors like organizational culture or demographic variables could shed light on when and for whom the mediating effect of appraisal fairness is most significant, enabling organizations to tailor their appraisal systems more effectively. By integrating these strategies, future studies can enhance the robustness and applicability of their findings, contributing to a deeper understanding of the mediating role of appraisal fairness in the context of employee performance appraisal exercise.

Authors' contributions

All authors have thoroughly reviewed and approved the final manuscript and confirmed their agreement with the research findings, conclusion, and recommendations. Musa Muhammad (Co-author 1): Role: Contributed to the literature review, methodology, data analysis, and interpretation of results. Assisted in drafting sections of the manuscript and provided critical feedback. Dr. Wasilu Sluleiman (Co-author 2): Role: Supervised the overall research process, including study design, data collection, and statistical analysis. Provide significant guidance and oversight throughout the research, including substantial input into the manuscript's writing, editing, and revision. Mohammad Abdullah Al Mamun (Corresponding author): Role: Oversaw the research design, coordination, and manuscript preparation. Managed communications with the journal and handled all revisions and correspondence related to the publication. Rasel Mahmud Jewel (Co-author 3): Role: Provided assistance with data analysis, contributed to the discussion of results, and participated in drafting and revising the manuscript. Md Abu Sufian Mozumder (Co-author 4): Role: Contributed to the literature review and assisted with manuscript editing, provided feedback on the overall content, and helped with the final revisions of the manuscript.

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No potential conflict of interest was reported by the author(s).

Informed consent

Informed Consent was collected verbally from the participants since the study involved many participants, and collecting written consent would have significantly delayed the data collection process. It was conducted privately, and participants were allowed to ask questions and withdraw their consent at any time.

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Data availability statement

The data supporting this study's findings will be available upon request from the first author (Musa Muhammad, Sa'adu Zungur University, Bauchi State, Nigeria).

References

- Abdullah, Z., & Malik, S. (2022). Perceived appraisal fairness effect on performance appraisal effectiveness and appraisal satisfaction in higher education. *Journal of Business and Social Review in Emerging Economies*, 8(2), 287–300. <https://doi.org/10.26710/jbsee.v8i2.2237>
- Adams, J. S. (1963). Towards an understanding of inequity. *The Journal of Abnormal and Social Psychology*, 67(5), 422–436. <https://doi.org/10.1037/h0040968>
- Ahmed, I., & Sattar, A. (2018). The influence of justice perceptions on performance appraisal reactions in telecom sector of Pakistan. *Global Management Journal for Academic & Corporate Studies*, 8(1), 86–100.
- Akan, O. H., Allen, R. S., & White, C. S. (2009). Equity sensitivity and organizational citizenship behavior in a team environment. *Small Group Research*, 40(1), 94–112. <https://doi.org/10.1177/1046496408326575>
- Alase, G., & Akinbo, T. (2021). Employee motivation and job performance: Empirical evidence from Nigeria. *Applied Journal of Economics, Management and Social Sciences*, 2(2), 16–23. <https://doi.org/10.53790/ajmss.v2i2.20>
- Al-Hunaiyyan, A., Al-Sharhan, S., Alainati, S., & Al-Duaij, M. (2023). A new competency model for digital instructors: Towards innovative teaching and learning in the digital era. *Journal of Data Acquisition and Processing*, 2023, 38(4), 1167–1186. <https://www.sjcjycl.cn/article/view-2023/04-1167.php>
- Al-Sharhan, S., Al-Hunaiyyan, A., & Al-Sharrah, H. (2010). A new efficient blended e-learning model and framework for k12 and higher education: Design and Implementation Success Factors. In I. D. (ICDIM) (Ed.), *Proceedings of the IEEE Fifth International Conference on Digital Information Management*. (ICDIM 2010), July 05–08, 2010 (pp. 465–471). Thunder Bay, Canada: IEEE. <https://ieeexplore.ieee.org/document/5664642/>

- Ameen, L., & Baharom, N. (2019). The assessment of effect of performance appraisal purposes on employee performance in Nigerian civil service. *Journal of Sciences and Humanities*, 16(5), 1–17.
- Atakpa, M., Ocheni, S., & Nwankwo, B. C. (2021). Review of performance appraisal and objective assessment of subordinate officers in Nigeria. *International Journal of Public Administration and Management Research*, 2(1), 39–47.
- Bakhshi, A., Kumar, K., & Rani, E. (2009). Organizational justice perceptions as predictor of job satisfaction and organization commitment. *International Journal of Business and Management*, 4(9), 145–154. <https://doi.org/10.5539/ijbm.v4n9p145>
- Bretz, R. D., et al. (1992). Objective and subjective moderators of the relationship between pay and job satisfaction. *Journal of Business and Psychology*, 6(4), 387–401.
- Buckner, C. S. (2023). *Exploring employees' perceived fairness and effectiveness of the performance appraisal process and the influence on employee retention*. University of Southern Mississippi.
- Cardy, R. L., & Dobbins, G. H. (2019). *Performance appraisal: Alternative perspectives*. South-Western Publishing.
- Charles, O. C. (2022). Performance appraisal and corporate business survival. A study of Nigerian bottling company. *International Journal of Innovative Social Science & Human Resource*, 10(1), 62–72. 2022
- Cohen, J. (1988). *Statistical Power analysis for the behavioral sciences (2nd)*. Lawrence Association Publishers.
- Cohen-Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes*, 86(2), 278–321. <https://doi.org/10.1006/obhd.2001.2958>
- Collins, C. J. (2021). Expanding the resource based view model of strategic human resource management. *The International Journal of Human Resource Management*, 32(2), 331–358. <https://doi.org/10.1080/09585192.2019.1711442>
- Cook, C., Jones, J., & Al-Twal, A. (2022). Validity and fairness of utilising student evaluation of teaching (SET) as a primary performance measure. *Journal of Further and Higher Education*, 46(2), 172–184. <https://doi.org/10.1080/0309877X.2021.1895093>
- Dal Corso, L., De Carlo, A., Carluccio, F., Colledani, D., & Falco, A. (2020). Employee burnout and positive dimensions of well-being: A latent workplace spirituality profile analysis. *PLoS One*, 15(11), e0242267. <https://doi.org/10.1371/journal.pone.0242267>
- DeConinck, J. B. (2010). The effect of organizational justice, perceived organizational support, and perceived supervisor support on marketing employees' level of trust. *Journal of Business Research*, 63(12), 1349–1355. <https://doi.org/10.1016/j.jbusres.2010.01.003>
- Deng, G. (2012). An empirical study of organizational justice, organizational citizenship behavior and service fairness. In *Technology for education and learning* (pp. 27–34). Springer.
- Ebegbetale, C. I., Enwezor, P. N., & Showemimo, I. O. (2023). Performance appraisal feedback, employee's work performance and the moderating role of work motivation. *European Journal of Applied Business and Management*, (9), 3.
- Erdogan, B., & Bauer, T. N. (2014). Perceived overqualification and its outcomes: The moderating role of empowerment. *Journal of Applied Psychology*, 99(2), 260–281.
- Fallon, L., Grapin, S., Noltemeyer, A., et al. (2022). Promoting equity and social justice in the peer review process. *Tips for Reviewers*, 43(1). Retrieved from <https://doi.org/10.1177/01430343211070165>
- Folger, R., & Konovsky, M. (1989). Effects of procedural and distributive justice on reactions to pay raise decisions. *Academy of Management Journal*, 32(1), 115–130. <https://doi.org/10.2307/256422>
- Fulk, J., Brief, J., & Barr, S. (1985). Trust in supervisor and perceived fairness and accuracy of performance evaluations. *Journal of Business Research*, 13(4), 301–313. [https://doi.org/10.1016/0148-2963\(85\)90003-7](https://doi.org/10.1016/0148-2963(85)90003-7)
- Gelbrich, K., & Roschk, H. (2020). A meta-analysis of organizational complaint handling and customer responses. *Journal of Service Research*, 14(1), 24–43. <https://doi.org/10.1177/1094670510387914>
- Giovanni, V., & Lorenza, M. (2022). The performance of performance appraisal systems: A theoretical framework for public organization. *Sage Journal of Public Personal Administration*, <https://doi.org/10.1177/0734371X211043560>
- Greenberg, J. (1986). Determinants of perceived fairness of performance evaluations. *Journal of Applied Psychology*, 71(2), 340–342. <https://doi.org/10.1037/0021-9010.71.2.340>
- Greenberg, J., & Colquitt, J. A. (2008). Two decades of organizational justice: Findings, controversies, and future directions. In *The SAGE handbook of organizational behavior: Volume one: Micro approaches* (Vol. 1, p. 73).
- Gruman, J., & Saks, A. (2019). Performance management and employee engagement. *Human Resource Management Review*, 21(2), 123–136. <https://doi.org/10.1016/j.hrmr.2010.09.004>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the result of PLS-SEM. *European Business Review*, 31(1), 2–24. Emerald Plc. <https://doi.org/10.1108/EBR-11-20190203>
- Hair, J. F., Sarstedt, M., Pick, M., Liengaard, B. D., Radomir, L., & Ringle, C. M. (2022). Progress in partial least square structural equation modeling use in marketing research in the last decades. *Psychology & Marketing*, 39(5), 1035–1064. <https://doi.org/10.1002/mar.21640>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hermanto, Y. B., & Srimulyani, V. A. (2022). The effects of organizational justice on employee performance using dimension of organizational citizenship behavior as mediation. *Sustainability*, 14(20), 13322. <https://doi.org/10.3390/su142013322>
- Ilgen, D. R., Fisher, C. D., & Taylor, M. S. (1979). Consequences of individual feedback on behavior in organizations. *Journal of Applied Psychology*, 64(4), 349–371. <https://doi.org/10.1037/0021-9010.64.4.349>

- Iorfa, S. K. (2021). A review of performance appraisal in the Nigerian context: Challenges and prospects for nation building [Paper presentation]. Psychology Annual Scientific Conference and Research Methodology Workshop, Nsukka, Nigeria.
- Jacobs, G., Belschak, F. D., & Den Hartog, D. N. (2020). Unethical behavior and performance appraisal: The role of affect, support, and organizational justice. *Journal of Business Ethics*, 121, 63–76. <https://doi.org/10.1007/s10551-013-1687-1>
- Jamieson, M. K., Govaart, G. H., & Pownall, M. (2023). Reflexivity in quantitative research: A rationale and beginner's guide. *Social and Personality Psychology Compass*, 17(4). Retrived from <https://doi.org/10.1111/spc3.12735>
- Jiang, K., Hu, J. I. A., Liu, S., & Lepak, D. P. (2017). Understanding employees' perceptions of human resource practices: Effects of demographic dissimilarity to managers and coworkers. *Human Resource Management*, 56(1), 69–91. <https://doi.org/10.1002/hrm.21771>
- Kavanagh, P., Benson, J., & Brown, M. (2007). Understanding performance appraisal fairness. *Asia Pacific Journal of Human Resources*, 45(2), 132–150. <https://doi.org/10.1177/1038411107079108>
- Kelly, C., Kasperavicius, D., Duncan, D., Etherington, C., Giangregorio, L., Presseau, J., Sibley, K. M., & Straus, S. (2021). 'Doing' or 'using' intersectionality? Opportunities and challenges in incorporating intersectionality into knowledge translation theory and practice. *International Journal for Equity in Health*, 20(1), 187. Retrieved from <https://doi.org/10.1186/s12939-021-01509-z>
- Khan, M., Yusoff, R., Hussain, A., & Ismail, F. (2019). The mediating effect of job satisfaction on the relationship of HR practices and employee job performance: Empirical evidence from higher education sector. *International Journal of Organizational Leadership*, 8(1), 78–94. <https://doi.org/10.33844/ijol.2019.60392>
- Kock, N. (2020). Multilevel analyses in PLS-SEM: An anchor-factorial with variation diffusion approach. *Data Analysis Perspectives Journal*, 1(2), 1–6.
- Konovsky, M. A., & Cropanzano, R. (1991). Perceived fairness of employee drug testing as a predictor of employee attitudes and job performance. *The Journal of Applied Psychology*, 76(5), 698–707. <https://doi.org/10.1037/0021-9010.76.5.698>
- Landy, F. J., Farr, J. L., Saal, F. E., & Freytag, W. R. (1976). Behaviorall anchored scales for rating the performance of police officers. *Journal of Applied Psychology*, 61(6), 750–758. <https://doi.org/10.1037/0021-9010.61.1.750>
- Lin, H. P., Hsieh, C. H., & Hsieh, H. Y. (2024). Evaluating the performance of ChatGPT-3.5 and ChatGPT-4 on the Taiwan plastic surgery board examination. *Heliyon*, 10(14), e34851. <https://doi.org/10.1016/j.heliyon.2024.e34851>
- Locke, E. A. (1976). The nature and Causes of Job Satisfaction. In M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology* (pp. 1297–1349). Rand McNally.
- Luo, Y. (2019). The independent and interactive roles of procedural, distributive, and interactional justice in strategic alliances. *Academy of Management Journal*, 50(3), 644–664. <https://doi.org/10.5465/AMJ.2007.25526452>
- Lyu, B., Su, W., Qi, Q., & Xiao, F. (2023). The influence of performance appraisal justice on employee job performance: A dual model. *SAGE Journal*. <https://doi.org/10.1177/21582440231194513>
- Malumba, J. (2021). The contextual antecedent and organizational citizenship behavior mediation on organizational justice of Banks in Uganda. *Selinus University of Science and Literature*,
- Memon, M., Salleh, R., Mirza, M., Cheah, J., Ting, H., Ahmad, M., & Tariq, A. (2021). Satisfaction matters: The relationships between HRM practices, work engagement and turnover intention. *International Journal of Manpower*, 42(1), 21–50. <https://doi.org/10.1108/IJM-04-2018-0127>
- Mikula, G., Petri, B., & Tanzer, N. (1990). What people regard as unjust: Types and structures of everyday experiences of injustice. *European Journal of Social Psychology*, 20(2), 133–149. <https://doi.org/10.1002/ejsp.2420200205>
- Mokhtar, A., Maouloud, V. M., Omowunmi, A. K., & Nordin, M. S. B. (2021). Teachers' commitment, self-efficacy and job satisfaction as communicated by trained teachers. *Management in Education*. <https://doi.org/10.1177/0892020621019400>
- Mollel, E. R., Mulongo, L. S., & Razia, M. (2023). The influence of performance appraisal practices on employee productivity: A case of Muheza district, Tanzania. *Issues in Business Matters and Economics*, 11(2).
- Naeem, M., Jamal, W., & Riaz, M. (2017). The Relationship of Employees' performance appraisal satisfaction with employees' outcomes: Evidence from higher educational institutes. *FWU Journal of Social Sciences*, 11(2), 71–81.
- Na-Nan, K., Kanthong, S., Joungtrakul, J., Smith, I., & Sanamthong, E. (2019). Reliability and validation of an instrument for measuring problems with performance appraisal: Exploratory and confirmatory factor analysis. *International Journal of Quality & Reliability Management*, <https://doi.org/10.1108/IJQRM-05-2020-0171>
- Neumann, O., & Schott, C. (2021). Behavioral effects of public service motivation among citizens: Testing the case of digital co-production. *International Public Management Journal*, 1–24. Google Scholar.
- Norfarizal, O. (2019). *Employee performance appraisal satisfaction: The case evidence from Brunei's civil service* [Doctoral dissertation]. University of Manchester, United Kingdom]. Published Research Thesis.
- Nutakor, S. D. (2019). Employee perceptions of fairness in performance appraisals and job satisfaction. Walden University Proudest Dissertations Publishing, Degree Year 2019. 13813570.
- Nvene, N. C., Yusuf, A. A., & Shuaibu, H. (2022). Effect of performance appraisal on employee productivity: A study of federal secretariat Abuja. *International Journal of Management, Social Sciences, Peace and Conflict Studies*, 2(5), 285–298.
- Oghenevwegba, E. (2024). Impact of performance appraisal system on employee performance in Nigeria telecommunication industry: A study of MTN Nigeria PLC in Asaba, Delta State. *Journal of Research in Business and Management*, (10), 167–180.

- Olubukola, A. O., & Pauline, E. O. (2022). Performance appraisal fairness on employees' performance in the Nigeria Television Authority (NTA), Abuja, Nigeria. *Journal of International Business Research and Marketing*, 7(3).
- Ozel, A., & Bayraktar, C. A. (2018). Effect of Organizational Justice on Job Satisfaction. In *Proceedings of the Industrial Engineering and Its Application Areas*, Vienna, Austria, 20-21 pp. 205–218. https://doi.org/10.1007/978-3-319-71225-3_18
- Rietsche, R., Aier, S., & Rivera, M. (2021). How does real-time feedback affect organizational performance. *Does Real-Time Feedback Matter? A Simulation Study to Link Individual and Organizational Performance*. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.3966150>
- Riyanto, S., Endri, E., & Herlisha, N. (2021). Effect of work motivation and job satisfaction on employee performance: Mediating role of employee engagement. *Problems and Perspectives in Management*, 19(3), 162–174. [https://doi.org/10.21511/ppm.19\(3\).2021.14](https://doi.org/10.21511/ppm.19(3).2021.14)
- Rodrigues, R. I., Gomes, C., & Junça, S. A. (2023). The role of satisfaction with the performance appraisal: A comparative study between the public and private sectors. *Review of Business Management*, 25(1), 72–87. <https://doi.org/10.7819/rbgn.v25i1.4216>
- Rupp, D., & Thornton-Lugo, M. (2018). Organizational justice. Oxford Bibliographies. <https://www.oxfordbibliographies.com/view/document/obo-9780199828340/obo-9780199828340-0044.xml>
- Rusbadrol, N., Panatik, S. A., Sarip, A., & Fakhruddin, F. M. (2021). Effects of organizational justice and organizational citizenship behavior on employee turnover intention. *Int. Journal of Academic Research in Business Social Science*, 11, 80–91.
- Saleh, F., & Ryan, C. (1991). Analyzing service quality in the hospitality industry using the SERVQUAL model. *The Service Industries Journal*, 11(3), 324–345. <https://doi.org/10.1080/02642069100000049>
- Sarstedt, M., Hair, J. F., Pick, M., Liengard, B. D., Radomir, L., & Ringle, C. M. (2022). Progress in partial least square structural equation modeling use in marketing research. *Psychology and Marketing*, 39(5), 1035–1064.
- Shah, N., Pathan, S., & Shah, S. (2022). Empirical analysis of the impact of performance appraisal system on employee's productivity: A study of Pakistan Telecommunication Limited (PTCL): Non-managerial employees' perspective. *Journal of Social Sciences Advancement*, 3(4), 258–268. <https://doi.org/10.52223/JSSA22-030408-54>
- Sharma, P. N., Liengard, B. D., Hair, J. F., Sarstedt, M., & Ringle, C. M. (2023). Predictive model assessment and selection in composite-based modeling using PLS-SEM: Extension and guidelines for using CVPAT. *European Journal of Marketing*, 57(6), 1662–1677. <https://doi.org/10.1108/EJM-08-2020-0636>
- Shmueli, G., Ray, S., Estrada, J. M. V., & Chatla, S. B. (2016). The elephant in the room: Predictive performance of PLS model. *Journal of Business Research*, 69(10), 4552–4564. <https://doi.org/10.1016/j.jbusres.2016.03.049>
- Simon, D. (2019). *Employee perceptions of fairness in performance appraisals and job satisfaction* [Doctoral dissertation] (pp. 1–8). Walden University. Pro Quest Dissertations & Theses. 13813570.
- Singh, J., Agrawal, R., & Ghosh, S. M. (2020). Performance appraisal of an educational institute using data mining techniques. In *Computing in Engineering and Technology: Proceedings of ICCET 2019* (pp. 733–745). Springer Singapore.
- Singh, S. K., & Singh, A. P. (2019). Interplay of organizational justice, psychological empowerment, organizational citizenship behavior, and job satisfaction in the context of circular economy. *Management Decision*, 57(4), 937–952. <https://doi.org/10.1108/MD-09-2018-0966>
- Stone, M., & Geisser, S. (1974). Cross validation choice and assessment of statistical predictions. *Journal of the Royal Statistical Society Series B: Statistical Methodology*, 36(2), 111–133. <https://doi.org/10.1111/j.2517-6161.1974.tb00994.x>
- Suifan, T. S., Diab, H., & Abdallah, A. B. (2017). Does organizational justice affect turnover-intention in a developing country? The mediating role of job satisfaction and organizational commitment. *Journal of Management Development*, 36(9), 1137–1148. <https://doi.org/10.1108/JMD-02-2017-0048>
- Tadesse, Y. (2021). *The effect of performance appraisal on employees' career development: Case study on Buna international bank S.C.* St. Mary's University School of Graduate Studies Addis Ababa University.
- Taneja, S., Srivastava, R., & Ravichandra, N. (2023). Employees' fairness perception towards performance appraisal system: antecedents and consequences. *Review of Managerial Science*, 18(8), 2163–2196. <https://doi.org/10.1007/s11846-023-006807>
- Tang, T. L., & Baldwin, L. J. (1996). *Distributive and procedural justice as related to satisfaction and commitment*. Southwestern Psychological Association.
- Tefera, C. A., & Hunsaker, W. D. (2020). Intangible assets and organizational citizenship behavior: A conceptual model. *Heliyon*, 6(7), e04497. <https://doi.org/10.1016/j.heliyon.2020.e04497>
- Thibaut, J., & Walker, L. (1975). Procedural justice: A psychological analysis. In *Research in personnel and human resources management* (Vol. 3, pp. 141–183). Lawrence Erlbaum Associates.
- Tremblay, M. (2019). Exploring the link between perceived inequity and employee attitudes: The mediating role of perceived organizational support and psychological contract breach. *European Management Journal*, 37(4), 449–458.
- Turner, P. (2020). The organization of work and employee engagement. In *Employee engagement in contemporary organizations* (pp. 167–192). Palgrave Macmillan.
- Uzochukwu, I. U., Shehu-Usman, M., Gambo, N., & Bakare, A. A. (2024). Impact of performance appraisal fairness on employee productivity in Nigerian Federal Regulatory Agencies. *European Journal of Business and Innovation Research*, 12(1), 53–71. <https://doi.org/10.37745/ejbir.2013/vol12n15371>

- Venkateswaran, N. M., Feldman, J. E., Anderson, S. H., Lewis, M. A., Armstrong, Brown, J. M., Comfort, M. L., Lowe, A. N., & Pineda, D. (2023). *Bringing an equity-centered framework to research: Transforming the researcher, research content, and practice of research*. RTI Press. Retrieved from <https://doi.org/10.3768/rtipress.2023.op.0085.2301>
- Vidè, F., Micacchi, L., Barbieri, M., & Valotti, G. (2023). The renaissance of performance appraisal: Engaging public employees through perceived developmental purpose and justice. *Review of Public Personnel Administration*, 43(4), 623–651. <https://doi.org/10.1177/0734371X221116584>
- Wadata, I. M. (2022). *Historical background of teachers service commission Bauchi*. Designed and Published by Network Ltd Bauchi State Nigeria.
- Wakwoya, F. (2020). Human resource management practice and teachers' job satisfaction: The case study of East Wollega Zone Secondary Schools, Western Ethiopia. *Asian Journal of Education and Social Studies*, 9–19. <https://doi.org/10.9734/ajess/2020/v12i130301>
- Wang, Z., Jiang, Z., & Blackman, A. (2021). Linking emotional intelligence to safety performance: The roles of situational awareness and safety training. *Journal of Safety Research*, 78, 210–220. <https://doi.org/10.1016/j.jsr.2021.06.005>
- Widiani, Y., & Dudija, N. (2020). A literature review of performance appraisal reaction: Predictors and measurement. In I. Rachmawati & R. Hendayani (Eds.), *Managing learning organization in Industry 4.0* (pp. 143–148). Routledge. <http://dx.doi.org/10.1201/9781003010814-26>
- Wong, K. K. (2019). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24, 1–32.
- Workagegnehu, Z. T. (2021). *Effect of Performance Appraisal Practice on Employee's Productivity*. Published Research thesis ST. Mary's University Addis Ababa Ethiopia.
- Zahida, A., & Sufiana, K. M. (2022). Perceived appraisal fairness effect on performance appraisal effectiveness and appraisal satisfaction in higher education. *Journal of Business and Social Science Review Emerging Economies*, ISSN: 2519-089X & ISSN (E) 2519-0326.