



Exceeding expectations: A study on human resource management implementation in construction organisations

**Authors:**

Munodani Chapano¹ 
Chux G. Iwu² 

Affiliations:

¹Department of Human Resources Management, Faculty of Business and Economic Sciences, Nelson Mandela University, Gqeberha, South Africa

²Department of Management and Entrepreneurship, Faculty of Economic and Management Sciences, University of the Western Cape, Cape Town, South Africa

Corresponding author:

Munodani Chapano,
munodani.chapano@mandela.ac.za

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Orientation: Human resource management (HRM) professionals and organisational leaders may maximise the performance of construction organisations by thoroughly understanding the implementation of HRM practices within these businesses.

Research purpose: The purpose of this study was to empirically investigate the extent to which recruitment and selection, training and development, performance appraisal and compensation systems are implemented in construction organisations.

Motivation of the study: The reason for this study was that a paucity of empirical research on the implementation of HRM practices makes it difficult to provide recommendations about HRM to optimise performance in construction organisations.

Research approach/design and method: This quantitative study was based on primary data collected from 63 construction personnel in various South African construction organisations in Cape Town. A cross-sectional quantitative survey design, with a self-administered questionnaire as the data collection tool, was used to collect data by means of convenience and judgemental sampling. Collected data were processed using the Statistical Package for Social Sciences (SPSS), version 28, and analysed using descriptive analysis and a one-sample *t*-test.

Main findings: The perceived implementation of HRM practices that meet minimum expected standards was significant for (1) recruitment and selection (R&S), (2) training and development (T&D) and (3) compensation systems (COS). However, the perceived implementation of (4) performance appraisal (PEA) best practices was found to be insignificant.

Practical/managerial implications: The implementation of HRM in construction organisations needs to incorporate the tenets that are central to the successful delivery of HRM services.

Contribution/value-add: This study emphasises the minimum expected HRM practices that should be observed in construction organisations.

Keywords: recruitment and selection; performance appraisal; compensation systems; training and development; construction organisations; South Africa.

Introduction

Most construction organisations in developing countries are marred by challenges such as high turnover, skill shortages, safety concerns, poor workforce management and resource allocation, which can negatively impact construction projects' performance (Ameh & Daniel, 2017; Dithebe et al., 2022; Ifediora et al., 2020; Ogunde et al., 2017; Opatha et al., 2024). South Africa is not spared and despite the construction industry playing a paramount role in the economic growth of the country, the performance of many projects has been hampered by inadequate management, shortages and costs of labour among other various issues (Aghimien et al., 2019; Dithebe et al., 2022; Khutso et al., 2023; Sesele, 2022). Consequently, some construction projects are not completed in time, while other projects collapse or are abandoned (Dithebe et al., 2022; Khutso et al., 2023; Nzekwe et al., 2015; Ogunde et al., 2017). The challenges have a bearing on human resources management (HRM), making HRM a critical function in construction organisations.

Construction organisations are widely known as multi-project environments (Loosemore et al., 2003; Ngwenya et al., 2019; Opatha et al., 2024). Multi-project organisations are organisational settings or units in which the bulk of the operations are executed as projects. These projects happen to run simultaneously and are similar, different, independent or interdependent

(Loosemore et al., 2003; Ngwenya et al., 2019; Opatha et al., 2024). Construction projects comprise the fabrication, alterations or repair of new or old structures such as residential houses, hospitals, schools, roads, dams and other infrastructure facilities (Olivia & Perera, 2024). A construction project can pass several phases from planning, designing and construction to commissioning (Olivia & Perera, 2024). Project performance can be measured by the ability of a project to meet budgeted cost, time and quality goals (Gray et al., 2017). This signifies that successful project performance entails projects that are completed within schedule and budget limits, and meet organisational and customer requirements such as an increase in sales, profits and market share for the business, while guaranteeing project team members' and customers' satisfaction and loyalty.

It is argued that HRM plays a huge role in determining the performance of construction organisations and consideration regarding personnel is required in every process of the construction project (Olivia & Perera, 2024). Opatha et al. (2024) add that because of resource constrain, allocating people to projects can be a challenging issue. The challenges have been recognised by many scholars (Ameh & Daniel, 2017; Loosemore et al., 2003; Olivia & Perera, 2024; Opatha et al., 2024). To ensure successful project delivery, the project manager should draw a well-prioritised project portfolio that fosters efficiency and effectiveness in the assignment and management of personnel and resources (Ameh & Daniel, 2017; Opatha et al., 2024). The extent to which the core HRM practices such as recruitment and selection, compensation systems, performance appraisal, and training and development are implemented can go a long way in overcoming challenges facing managers in this context, exerting huge implications on organisational performance and influencing success and failure of projects (Abuazoom et al., 2017). Unlike in other organisations, project managers and managers in construction multi-project environments are most of the time accountable for overseeing the accomplishment of diverse separate projects, as well as for coordinating resource allocations and interdependencies between projects (Ngwenya et al., 2019; Opatha et al., 2024; Teller et al., 2012). The projects could be located in different places and be at varying stages of construction (Sethi & Kataria, 2017).

Yet, it is posited that the implementation of HRM practices in construction organisations is mostly informal. It is argued that normal procedures required for the effective delivery of HRM services are often bypassed in construction organisations despite the industry being among the most labour-intensive (Abuazoom et al., 2017; Babalola et al., 2022; Loosemore et al., 2003). Babalola et al. (2022) add that unlike in developed countries, most developing countries lack skilled personnel for construction projects because of poor recruitment processes and talent retention strategies, among others. However, this is based on limited research conducted on this phenomenon. In fact, Khan and Rasheed (2015) and Zavyalova et al. (2020) affirm that a gap exists

between HRM and construction multi-projects environments both in research and practice in comparison with other industries. Typically, project managers and managers in construction organisations require guidance in configuring HRM (Zavyalova et al., 2020). Although Trehan and Setia (2014) disagree with the assertion that developing countries lack formalised management of HRM in construction organisations, no further findings are provided.

To understand HRM circumstances in construction organisations, the business community and scholars rely mostly on theoretical knowledge because of a lack of empirical research and evidence. It is a cause for concern because it is believed that the economic growth of a country can be improved by enhancing the labour productivity of construction projects, but the profits of construction firms are decreased because of a reduction in project completion delays (Aghimien et al., 2024; Gurmu, 2018). This is particularly relevant in South Africa where out of the top 10 employer industries for the period 2022 to 2023, the construction industry is ranked the third largest industrial employer. It makes up 7.8% of the labour force that is employed in all industries (Stats SA, 2023). Moreover, in Quarter 4 of 2023, gains in labour employment occurred in finance (480000), community and social services (102000) and construction (69000). Gains were seen in agriculture (211000), construction (180000) and finance (135000) during the same time in 2022 (Stats SA, 2023). In addition to ranking among the top five industrial employment, the construction industry contributes 109.5 billion rand to the gross domestic product (GDP) of the nation, making it a central player behind economic growth in South Africa (Stats SA, 2023).

HRM is therefore a crucial factor in project success in construction organisations. It also points out that little is known about the extent to which HRM is practised in construction organisations and how this could differ from other organisations, especially in developing countries and South Africa is no exception. This is immensely owing to few studies that theorised and empirically investigated the implementation of HRM practices in construction organisations, making it somewhat difficult to make recommendations to optimise performance through HRM in construction organisations.

A dearth of research and conflicting views regarding the extent to which various HRM practices are implemented in construction organisations lays the groundwork for more studies in this field. Babalola et al. (2022), Popaitoon and Siengthai (2014) and Opatha et al. (2024) advocate more depth in research related to understanding the implementation of HRM practices in construction organisations. This study, therefore, sought to empirically investigate the extent to which HRM practices, namely recruitment and selection, compensation systems, performance appraisal and training and development are implemented in construction organisations. These HRM practices are widely dubbed as performance-enhancing systems within any organisational setting,

including construction organisations (Alajlani & Yesufu, 2022; Armstrong & Taylor, 2020; Awadhi & Muslim, 2023; Dandage et al., 2021; Gurmu, 2020; Khan & Rasheed, 2015; Opatha et al., 2024; Rambe et al., 2022; Yasin, 2022).

Objectives of the study

The objectives of the study were to:

- Review exiting literature on the implementation of recruitment and selection, compensation systems, performance appraisal, and training and development in construction organisations.
- Present empirical evidence of the perceived implementation of recruitment and selection, compensation systems, performance appraisal, and training and development in selected South African construction organisations.
- Present empirical evidence of the impact of recruitment and selection, compensation systems, performance appraisal, and training and development collected from representatives in selected South African construction organisations.

This article's study is a subset of a larger research project that examined the effects of high-performance work practices in South African construction enterprises. The article is structured as follows: the 'Literature review' section outlines the theoretical underpinnings of the study, followed by the 'Research methodology' and 'Results' sections. The 'Discussion' section includes suggestions for future research, potential limitations of the study and practical implications of the findings. Finally, the 'Conclusion' section summarises the key points.

Literature review

The literature review explores the four HRM practices of recruitment and selection (R&S), training and development (T&D), performance appraisals (PEA) and compensation system (COS). These four have been referred to as the four core generic functions of HRM and are designed to have an impact on the performance of employees across all organisational levels and in the construction industry (Alajlani & Yesufu, 2022; Awadhi & Muslim, 2023; Bao et al., 2021; Dandage et al., 2021; Gurmu, 2020; Khan & Rasheed, 2015; Opatha et al., 2024; Rambe et al., 2022; Yasin, 2022).

Theoretical framework

While there are numerous frameworks that are used to explain and understand issues related to HRM and organisational performance, the institutional theory is appropriate in this study. The institutional theory advocates that organisations should conform to a set of rules, norms and requirements to be regarded as legitimate and to receive support in the environments in which they exist, as they change to grow and survive (Scott & Meyer, 1983; Selznick, 1948). This theory suggests that the institutional settings or the location or industry in which the organisation operates influence behaviours, such as the policies and practices the

organisation engages in, the extent of that engagement and the performance of the organisation (Meyer & Rowan, 1977). The institutional theory is incorporated in this study because it serves as the basis for establishing the effect of the characteristics of construction organisations on the level of implementation of HRM practices in this industry. In this regard, the institutional framework provides a basis for understanding HRM practices implementation within the unique South African cultural, economic and legal environment and the construction industry. In South Africa, there are legislations, such as the *National Qualifications Framework (NQF) Act, No. 67 of 2008*, the *Skills Development Act (SDA), No. 97 of 1998* and the *Skills Development Levies Act (SDL), No. 9 of 1999*, which regulate training and development. *Basic Conditions of Employment Act (BCEA), No. 75 of 1997* regulates conditions of employment such as compensation and working hours. *Employment Equity Act (EEA), No. 55 of 1998* seeks to promote equity by eliminating discriminatory practices in HRM practices of recruitment and selection and performance appraisal for example (Wärnich et al., 2022). In addition, the characteristics of the construction industry, such as being project-based in nature, a multi-project environment, the existence of extensive safety regulations, as well as being highly labour-intensive may influence the level of HRM implementation as compared to other sectors (Opatha et al., 2024).

It is asserted that construction organisations perform better if they recruit and select personnel who are competent as well as ensure that the employees are equipped with the necessary skills and knowledge through training and development (Shikweni et al., 2019). Similarly, effective compensation and performance appraisal systems promote employees' commitment to the organisation and high level of performance towards organisational goals (Shikweni et al., 2019). Based on the institutional theory, it can therefore be argued that the implementation of the four core generic functions of HRM (R&S, T&D, PEA and COS) can be influenced by what constitutes good practice and policies in South Africa and the characteristics of the construction industry.

Human resource management practices are generally credited by researchers as playing a positive role in organisational success (Khan & Rasheed, 2015; Rambe et al., 2022; Wright & Ulrich, 2017). A complete HRM structure in an organisation is emphasised to include factors and functions such as recruitment and selection, training and development, performance appraisal and compensation system (Bao et al., 2021; Opatha et al., 2024; Rambe et al., 2022).

Extant research (Abuazoom et al., 2017; Babalola et al., 2022; Zavyalova et al., 2020) demonstrates no unison among researchers regarding the perception of HRM on performance in construction organisations. Opatha et al. (2024) note that the construction environment is a highly pressured workspace, which leaves little room for formal HRM practices. Moreover, there is a prevalence of fixed-term work,

casualised forms of labour and the subcontracting of work in the construction industry as companies try to extricate themselves from certain direct employment obligations (Ngwenya et al., 2019; Opatha et al., 2024). Other researchers (Sethi & Kataria, 2017) point out that HRM faces challenges and its influence on construction project performance is minimal because of the temporariness of projects. Construction projects are mostly constrained by scope, cost, time and quality as compared to social-cultural factors (Gray et al., 2017).

However, construction project outcomes will, to some extent, always be impacted by HRM's effect on factors including time, quality and cost. A bigger share of construction project costs is attributed to human resources (Ameh & Daniel, 2017; Loosemore et al., 2003; Opatha et al., 2024). Also, effective HRM delivery is required to manage contractual relationships created by subcontractors (Ameh & Daniel, 2017; Opatha et al., 2024). Construction organisations involved in international projects are urged to invest in staff development and fulfil project teams' career aspirations (Dandage et al., 2021). This requires HRM practices to be successfully implemented; otherwise, the companies will lose their best staff to competitors.

Recruitment and selection

Recruitment is the process of attracting a large pool of qualified applicants to apply for a vacant job in the organisation, while selection is choosing from a group of applicants the best and most qualified individual for the job (Wärnich et al., 2022). Recruitment and selection methods significantly influence workers' performance in the construction industry (Dandage et al., 2021; Oluwatosin et al., 2024; Opatha et al., 2024). It is recommended that before recruitment and selection, the requirements of a job should reflect all job profiles. Gurmu (2020) opines that construction organisations could enhance productivity by conducting skills assessments and evaluations where project team members' certificates and previous experience are checked. In construction organisations, assembling a project team with diverse experience and skills is a vital factor for successful completion of projects (Al-Abbadi & Agyekum-Mensah, 2019; Dandage et al., 2021; Oluwatosin et al., 2024). This suggests that construction organisations should consistently follow a systematic process of recruitment and selection, from creating the advertisement to offering the job to the candidate who meets all the requirements. An advertisement that creates a good impression of the organisation and its projects attracts suitable prospective candidates (Dandage et al., 2021).

Ekwoaba (2015) investigated the fairness and value judgement of different systems and concluded that the more objective the recruitment and selection criteria, the better the organisation's performance. Fairness and trustworthiness are enhanced when the recruitment and selection process adheres to the country's labour laws, strictly follows the organisation's recruitment and selection policy, and provides potential applicants with accurate information about the

job, ensuring that only those who meet the minimum requirements apply for the job. This implies that the recruitment and selection process devoid of such ingredients could result in the organisation experiencing workforce challenges such as absenteeism, high turnover, high conflicts, declining productivity and high training and development costs. Regardless, it is posited that the recruitment and selection process in construction organisations is not conducted systematically and some minimum best practices are circumvented (Ameh & Daniel, 2017). For instance, construction organisations rarely apply performance and knowledge tests in their recruitment and selection process; and the selection process could be affected by interferences and other variables such as a preference for male over female applicants, younger employees over older employees and illegal or legal immigrants over unskilled nationals (Ameh & Daniel, 2017; Dithebe et al., 2022).

Training and development

Training and development entail formal activities an organisation undertakes to equip its employees with the knowledge, skills, attitudes or behaviours necessary for optimal performance in their current and future jobs (Wärnich et al., 2022). Training and development of the workforce in construction projects could result in increased productivity, decreased absenteeism and reduced turnover (Gurmu et al., 2020; Olivia & Perera, 2024). While training is focussed more on the ability to become adept in and master the performance of a particular skill, the thrust of development is to maintain highly knowledgeable staff with competencies that can allow them to advance in their careers and remain aligned with the changing world (McKenna & Beech, 2014). This is crucial for construction organisations where multi-skilled labour is needed to enhance project performance. Training of workers comprises formal education in the execution of a construction project activity and site-specific training that can also be provided to supervisors and site staff (Olivia & Perera, 2024). These on-the-job or off-the-job trainings range from construction techniques and equipment operation, health and safety protocols, communication and conflict resolution skills, team building and leadership skills to courses that provide knowledge in the execution of specific construction project deliverables and identification of project risks (Olivia & Perera, 2024; Oluwatosin et al., 2024).

Ghodrati et al. (2018) and Oluwatosin et al. (2024) find a positive correlation between management strategies such as training and development and labour productivity in construction organisations. In addition, training and development have been found by many researchers to be sharply linked to job performance (Olivia & Perera, 2024; Opatha et al., 2024). Empirical works confirm that training and development programmes have significant effects on the companies' outputs (Armstrong & Taylor, 2020; Mampuru et al., 2024; McKenna & Beech, 2014). Thus, deviation in research trends is merely in terms of the various forms of these programmes that researchers and experts recommend. Kum (2014), for instance, recommended that the conducting

of employee training should be on a continuous basis for improved employee performance in the organisations. Tshikovhi (2012) classified performance improvement dimensions into personal, customer, internal business, and learning and growth. In South African organisations, training and development should be systematic and regularised. If organisations want their training interventions to be funded and accredited, they are required to follow the guidelines of the *NQF, Act 67 of 2008*, the *SDA, No. 97 of 1998* and the *SDL, No. 9 of 1999*. This suggests that formal training is critical for construction project performance, failure of which can lead to sub-standard project deliverables and poor management of risks (Dandage et al., 2021). However, training and development in construction organisations for semi-skilled and unskilled workers is mostly done to meet only operational requirements and seldom results in accredited, recognised outcomes (Ameh & Daniel, 2017; Opatha et al., 2024). Ameh and Daniel (2017) add that the training and development interventions offered in most construction firms are not to enhance the competencies of the workforce but to orient them with the organisational facilities.

Compensation system

Compensation refers to the payment (e.g. wages, salaries, commissions and bonuses) given to employees in return for their contribution to the success of the organisation through job performance (Gobind et al., 2016). Although it may be impossible for employers to buy employee's loyalty and commitment, the value that the employees create for the organisation should be rewarded through compensation (Birhanu, 2022). Thus, compensation has been found to be one of the factors that motivate construction employees, while the demotivators could include aspects such as underpayment, delayed payment and unequal pay (Aghayeva & Slusarczyk, 2019). Motivated employees can add value by aiding an organisation to achieve its targets. Compensation, among other contributors, is considered essential in attracting and retaining skilled construction project staff (Bhoola & Giangreco, 2018).

Human capital is an important resource in any organisation. In the overall performance of an organisation, it is very important to retain an efficient and effective workforce (Armstrong & Taylor, 2020; Aslam et al., 2015). Some studies carried out found compensation to be the most influential HRM practice on the performance of employees in comparison with other HRM practices tested (Aker, 2016; Ampong, 2024; Hassan, 2016; Shamki, 2021). For instance, a quantitative analysis by Ampong (2024) demonstrated that there is a strong and positive relationship between compensation and job performance. This suggests that compensation can be an enabler for higher productivity in construction organisations and that an optimum compensation system consists of both intrinsic and extrinsic rewards in line with existing market conditions (Wärnich et al., 2022). Extrinsic rewards cover monetary rewards and benefits, with monetary benefits comprising aspects such as salary, wages and bonuses, while benefits entail paid

holidays, accommodation, insurance and retirement benefits, among others. Intrinsic rewards are non-financial and may include recognition of performance, promotion, training opportunities and an interesting working environment (Wärnich et al., 2022). These are believed to motivate and influence the performance of construction employees (Mustapha et al., 2024). However, in construction organisations, the compensation practices are somewhat not implemented effectively (Srinivasan et al., 2023). While construction organisations compensate their staff, there are issues of delayed payments and poor wages, owing to a lack of knowledge and less priority given to the impact of salary structure and socio-economic welfare of project staff by management (Dandage et al., 2021; Srinivasan et al., 2023).

Performance appraisal

Performance appraisal is the process of systematically evaluating the work done by an employee against an agreed-established standard to determine the extent to which the employee has performed as per the job requirement (Gobind et al., 2016). Performance appraisals are both evaluative and developmental as they involve the review of how employees are performing and achieving results as per the set objectives, followed by actions such as rewarding good performance, or improving performance in cases where there are disparities between desired performance and actual performance (Adams et al., 2024). Performance appraisal is an important factor in motivating construction employees, as it is viewed as the basis upon which salary increments, recognition and promotion are anchored (Dandage et al., 2021). Results from previous research carried out in different industries demonstrate a positive relationship between organisational performance and performance appraisal (Adams et al., 2024; Govender & Bussin, 2020). Performance appraisals that are result-oriented and linked to outcomes such as compensation and promotion are positively associated with employee productivity (Adams et al., 2024; Oluwatosin et al., 2024). Organisations are required to use appropriate review methods that provide accurate performance information about employees. While there is no best method, Mphahlele and Dachapalli (2022) recommend that organisations should carry out frequent staff appraisals to enhance employees' productivity.

Nonetheless, performance appraisal should be fair, reward outstanding work, enhance employees' potential, motivate employees and be used as a yardstick for training, promotion and retrenchment (Mphahlele & Dachapalli, 2022; Oluwatosin et al., 2024). Performance appraisal that yields better results for the organisation is conducted systematically and uses an established performance measurement criterion. For instance, the manager and the employees should agree on performance standards, performance appraisal methods and the performance appraisal process, and employees should be counselled after appraisal, for even better results (Adams et al., 2024). In a construction multi-project environment, although there is some ambiguity surrounding who has the official authority to conduct performance reviews, it is

acknowledged that line managers and project managers have this authority (Bredin & Söderlund, 2011). In this regard, it postulated that construction project failures are also attributed to a lack of and ineffective appraisal of project staff, manifesting in using inappropriate appraisal methods and failure to appropriately reward performance (Dandage et al., 2021). Defective and flawed performance appraisals may result in the morale, retention and participation of project team members adversely affected. Project managers and line managers are therefore urged to constructively employ logical performance monitoring mechanisms to focus teamwork on completing projects on schedule and under budget (Oluwatosin et al., 2024).

Human resource management in other national contexts

An overview of the practice of HRM in other countries such as Nigeria has revealed that most training and development practices in the construction industry do not follow a systematic procedure in identifying training needs, and training and development interventions are mainly focussed on orienting new employees as supposed to equipping employees with competencies required for optimum performance (Ameh & Daniel, 2017). Recruitment and selection practices are influenced by favouritism, ethnicity and nepotism, resulting in less competent people getting employed in some Nigerian construction organisations (Ameh & Daniel, 2017). It is also pointed out that there is high labour turnover in Nigerian construction companies engendered by low compensation and unsustainable employment practices (Otali & Oladokun, 2018). The competent employees who leave the construction industry find better-paid jobs in mining, banks and education industries (Otali & Oladokun, 2018). Oke et al. (2016) found that low productivity and decreased employee performance caused by poor recruitment and selection, low compensation, unfavourable performance appraisal and training, and development practices are also attributed to non-qualified managers employed to perform HRM duties in some Nigerian construction organisations. This finding resonates with Bredin and Söderlund's (2011) assertion that role conflict between line and project managers as to who should coordinate HRM issues hampers project success in construction organisations.

Meanwhile, a systematic literature review study was conducted at Auckland University of Technology in New Zealand in which 77 studies focussing on HRM issues in developed nations such as the United States, China, Australia, Hong Kong and the United Kingdom were reviewed, construction organisations are advised to implement best HRM practices to retain a productive and motivated workforce (Abdolmaleki et al., 2024). Some of the recommended HRM practices include the provision of merit-based compensation systems, performance appraisals linked to promotional opportunities and ensuring that there are clear career progression paths for personnel (Abdolmaleki et al., 2024). Similarly, South African construction industries are urged to improve and acknowledge diversity, the regulatory framework,

labour market dynamics, and internal and external influences to ensure the effective implementation of HRM practices that drive business outcomes (Shikweni et al., 2019).

The review of the literature and objectives of this research led to the formulation of the following hypothesis:

- H1:** Best HRM practices of recruitment and selection (R&S) are perceived as not being implemented in South African construction organisations.
- H2:** Best HRM practices of training and development (T&D) are perceived as not being implemented in South African construction organisations.
- H3:** Best HRM practices of compensation systems (COS) are perceived as not being implemented in South African construction organisations.
- H4:** Best HRM practices of performance appraisal (PEA) are perceived as not being implemented in South African construction organisations.

Research methodology

Research approach

This study adopted a positivist paradigm and a quantitative approach to address the research objectives of this study. Using a cross-sectional survey, a structured questionnaire was used to collect data. Thus, in this study, reality was assumed as objective and behaviour observable, which permitted the use of scientific methods to collect and analyse data from the population sample (Hair et al., 2018). While a questionnaire was used to collect data, data analysis was performed using descriptive and inferential statistical methods (Hair et al., 2018). The Statistical Package for Social Sciences (SPSS), version 28, was used to process data.

Research respondents and sampling

Population

Population refers to all units (people, places or objects) from which data can be collected in a study (Saunders et al., 2019). The population for this study comprised people who were directly involved in executing projects, such as project managers, quantity surveyors, engineers, construction managers and architects (Opatha et al., 2024) employed in construction organisations in Cape Town, South Africa. In addition, other people (administrative staff and line managers), such as marketing, HRM and finance whose involvement in the running of projects was perceived to be indirect were included. There are about 30 construction companies in Cape Town (Construction companies, 2024).

Sampling

The sample is a part of the population selected to be studied and to make inferences about the population, while sampling is the method or procedure employed to choose a sample (Hair et al., 2018). Non-probability sampling technique called convenience was used to select five construction organisations. This sampling technique allowed the researcher to conduct the study in five construction organisations that were

reachable, and their employees were willing to participate in this study (Saunders et al., 2019). Judgement sampling, which allowed the inclusion of respondents with knowledge of the investigated variable was used to select respondents from the selected construction organisation to complete the questionnaire (Saunders et al., 2019).

The self-developed questionnaire was handed over to a contact person such as an HRM manager in each of the five selected construction organisations. The contact person ensured that the questionnaires were distributed to all eligible respondents as outlined in the cover letter of the questionnaire and collected after completion. A total of 70 questionnaires were handed to potential respondents. Of these, 63 were completed and received as usable, achieving a response of 90%. The results revealed a male-dominated construction environment with 71.4% of the respondents being males, while 28.6% were females. In addition, most respondents were construction and/or site managers (28.57%), followed by line staff and/or admin staff (26.98%), project managers (15.87%), engineers (9.52%), architects (7.94%), and commercial managers and quantity surveyors were other respondents with 11.11%. These demographics show that data were gathered from the intended audience.

Research measuring instrument

The questionnaire had Section B, in addition to Section A, which captured biographical details. Section B (HRM practices) measured the respondents' perceptions about the implementation of the four HRM practices in their organisations. This section consisted of 20 items, with responses measured on a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). Respondents were asked to rate the extent to which some best-expected standards of the four HRM practices, namely recruitment and selection (R&S) (four items), training and development (T&D) (six items), performance appraisal (PEA) (six items) and compensation system (COS) (four items), were practised in their organisation. The 20 items for Section B (HRM practices) were derived from the literature as no validated scale for measuring HRM practices was found to exist.

Statistical analysis

Statistical Package for Social Sciences was used to process data, with descriptive statistics such as mean score (M), standard deviation (SD) and Cronbach's alpha coefficients used to describe the data, while to determine significance, one-sample t -tests were employed (Saunders et al., 2019).

Ethical considerations

An application for full ethical approval was made to the Cape Peninsula University of Technology and ethics consent was received on 18 May 2016. The ethics approval number is 2016FBREC353.

Obtaining ethics permission from the institution where this study was conducted and written consent from the construction organisations whose respondents participated were essential ethics processes followed in this study. Additionally, it was ensured that respondents were aware of the study's purpose and their eligibility before they voluntarily agreed to complete the questionnaire. Respondents were also informed of their right to withdraw from the study at any time if they chose to do so, and issues of anonymity were addressed and guaranteed.

Results

Descriptive statistics for the human resource management practices

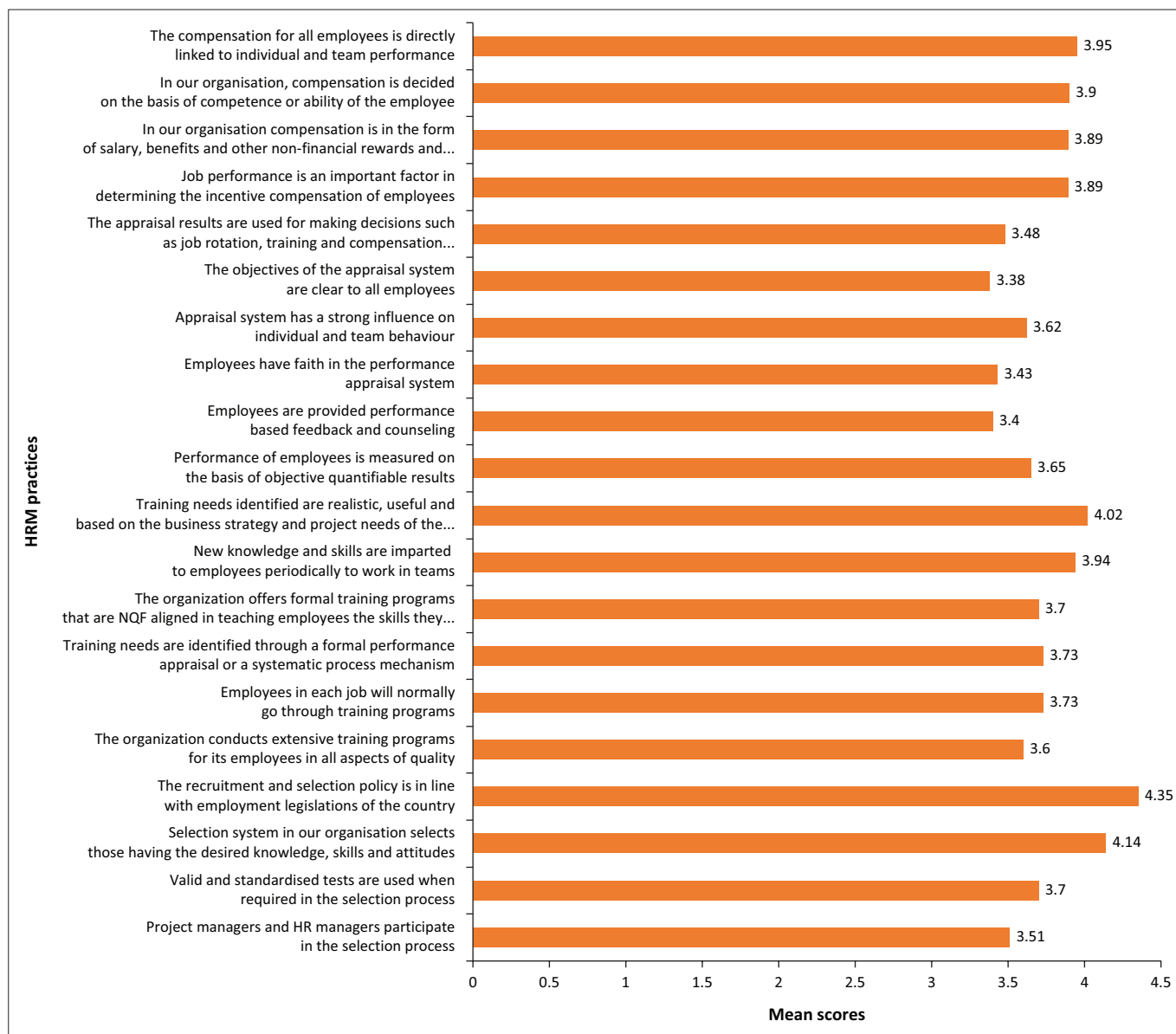
Table 1 presents descriptive statistics and Cronbach's alpha coefficient for the HRM practices – R&S, T&D, PEA and COS. The Cronbach's alpha coefficient obtained for all 20 items for R&S, T&D, PEA and COS was 0.88, confirming the reliability of the scale (Saunders et al., 2019). Among all the four HRM practices, R&S obtained the highest mean score ($M = 3.93$), followed closely by COS ($M = 3.91$). This indicates that the respondents' opinions of the implementation of R&S and COS in their organisations were generally favourable. Performance appraisal recorded the lowest mean of 3.49, reflecting responses leaning to the answer option 'neutral', while T&D scored a mean of 3.79, indicating the answer option inclined towards 'agree'. This means that respondents considered the implementation of PEA in the organisations to be average. Standard deviations of 0.69 and 0.60 for T&D and PEA, respectively, indicate relatively divergent views among respondents regarding the implementation of the practices in the organisations as compared to counterparts, R&S and COS, recording markedly lower standard deviations of 0.59 and 0.50, showing relatively similar perceptions among respondents regarding their implementations in the organisations.

Descriptive statistics for the various items measuring R&S, T&D, PEA and COS are presented in Figure 1. The item 'the recruitment and selection policy is in line with employment legislations of the country' accounts for the highest mean score ($M = 4.35$) followed by 'the selection system in our organisation selects those having the desired knowledge, skills and attitudes' ($M = 4.14$) for R&S and 'training needs identified are realistic, useful and based on the business strategy and project needs of the organisation' ($M = 4.02$) for T&D (see Figure 1). All other

TABLE 1: Means, standard deviations and Cronbach's alpha coefficient for recruitment and selection, training and development, perceived implementation of performance appraisal and compensation systems.

Descriptive statistics	R&S	T&D	PEA	COS
<i>N</i>	63.00	63.00	63.00	63.00
Mean	3.93	3.79	3.49	3.91
Standard deviation	0.59	0.69	0.60	0.50

Note: Cronbach's alpha for R&S, T&D, PEA and COS = 0.88; No of items = 20.00.
R&S, recruitment and selection; T&D, training and development; PEA, performance appraisal; COS, compensation systems.



HRM, Human Resource Management; HR, Human Resources, NQF, National Qualification Framework.

FIGURE 1: Perceived application of human resource management practices: Mean scores.

items obtained mean scores of above 3.5, indicating 'agreement' with the implementation of the HRM practices, except for items: 'the appraisal results are used for making decisions such as job rotation, training and compensation, promotion' ($M = 3.48$), 'employees have faith in the performance appraisal system' ($M = 3.43$), 'employees are provided performance based feedback and counselling' ($M = 3.40$) and 'the objectives of the appraisal system are clear to all employees' ($M = 3.38$), all for PEA. These responses indicated respondents' doubting stance about the implementation of the PEA best practices.

The significance of the implementation of the HRM practices and the hypothesis were measured by one-sample t -tests. Table 2a displays the findings of the t -test for the four HRM practices, namely R&S, T&D, PEA and COS. A t -test determines if the outcome attained for each HRM practice is notably distinct from a hypothetical (3.5), a mean score

indicating responses between 'neutral' ($M = 3$) and 'agree' ($M = 4$). As summarised in Table 2b, the average scores for R&S, COS and T&D are considerably and statistically more than the score indicating '3.5'. For example, the mean score for R&S (3.93 ± 0.59) is statistically and considerably greater than the rating for '3.5' ($t [62] = 5.70, p = 0.000$) (see Table 2a and Table 2b), with a mean difference of 0.42 (95% CI: 0.28 to 0.57), while the mean score for COS (3.91 ± 0.50) is statistically and considerably greater than the rating for '3.5' ($t [62] = 6.53, p = 0.000$), with a mean difference of 0.41 (95% CI: 0.28 to 0.53). In addition, the mean score for T&D (3.79 ± 0.69) is statistically and considerably greater than the rating for '3.5' ($t [62] = 3.29, p = 0.002$), with a mean difference of 0.29 (95% CI: 0.11 to 0.46). In contrast, the mean score for PEA (3.49 ± 0.60) is statistically and considerably lower than the rating for '3.5' ($t [62] = -0.11, p = 0.917$), with a mean difference of -0.01 (95% CI: -0.16 to 0.14) (see Table 2a and Table 2b).

TABLE 2a: One-sample *t*-test for human resource management practices recruitment and selection, training and development, performance appraisal and compensation systems.

One-sample test	<i>t</i>	<i>df</i>	One-sided <i>p</i>	Two-sided <i>p</i>	Mean difference	95% confidence interval of the difference	
						Lower	Upper
						R&S	5.70
T&D	3.29	62	0.001	0.002	0.29	0.11	0.46
PEA	-0.11	62	0.458	0.917	-0.01	-0.16	0.14
COS	6.53	62	0.000	0.000	0.41	0.28	0.53

Note: Test value = 3.5.

df, degrees of freedom; R&S, recruitment and selection; T&D, training and development; PEA, performance appraisal; COS, Compensation systems.

TABLE 2b: One-sample *t*-test for human resource management practices recruitment and selection, training and development, performance appraisal and compensation systems (*N* = 63).

One-sample test	<i>N</i>	Mean	SD	SE mean
R&S	63	3.93	0.59	0.075
T&D	63	3.79	0.69	0.087
PEA	63	3.49	0.60	0.076
COS	63	3.91	0.50	0.063

Note: Test value = 3.5.

R&S, recruitment and selection; T&D, training and development; PEA, performance appraisal; COS, Compensation systems; SE, standard error; SD, standard deviation.

Hypothesis 4 is therefore accepted, and the conclusion is made that the minimum expected standards of HRM practices of PEA are perceived to be significantly not implemented in South African construction organisations. Differently, Hypotheses 1, 2 and 3 are rejected and the conclusion is made that minimum expected standards of HRM practices of R&S, T&D and COS are perceived to be significantly implemented in South African construction organisations.

Discussion

Outline of the results

This study aimed to empirically investigate the extent to which HRM practices, namely R&S, T&D, PEA and COS are implemented in construction organisations. To fulfil the aim of this study, a literature study was conducted first, and then via surveying people such as site managers, line staff, administrative staff, project managers, quantity surveyors, engineers, commercial managers and architects, empirically probe perceived implementation of R&S, T&D, PEA and COS in construction organisations in South Africa. The following is a discussion of the results of descriptive and one-sample *t*-test analysis.

Descriptive analysis

The mean scores for the HRM practices (R&S, T&D and COS) ranged from 3.79 to 3.93 (Table 2b), indicating 'agreement' that minimum expected standards of HRM practices were implemented. Recruitment and selection practices were perceived to be mostly implemented, followed by COS and T&D. The least implemented HRM practice was PEA, whose mean score was 3.49, indicating slight 'agreement' to 'non-agreement' that the minimum expected standards were implemented. On one hand, these findings coincide with

research that indicates that recruitment and selection processes should ensure that competent people with relevant skills, knowledge, attitudes and qualifications and who resonate with the organisational values are recruited and selected by an organisation (Armstrong & Taylor, 2020; Gurmu, 2020). Through training and development, new employees need to be oriented and sensitised to the culture of the organisation and senior employees consistently equipped and updated with the skills and knowledge required to efficiently discharge their jobs (Mampuru et al., 2024; McKenna & Beech, 2014). Employees in construction organisations need to be educated on health and safety protocols, communication and conflict resolution skills, team building and leadership skills, for example (Olivia & Perera, 2024; Oluwatosin et al., 2024). An effective compensation system helps an organisation to attract, retain and motivate talent, and it should comply with the labour laws of the country (Kgoedi, & Pillay, 2018; Wärmich et al., 2022). In a changing world of work, organisations are urged to adopt and implement state-of-the-art HRM practices to gain a competitive advantage through human capital (Van der Sluis & Barkhuizen, 2023). Thus, these results seem to dismiss the belief that construction organisations are marred by less formalised HRM practices as compared to their counterparts in other industries, which can negatively affect their ability to attract, retain, develop and utilise top talent (Abuazoom et al., 2017; Babalola et al., 2022).

On the other hand, the perception by the respondents that performance appraisal was not implemented as per the desired standard could mean that the organisations were struggling to reap the results of an effective performance appraisal. For instance, turning around employees who are performing poorly and encouraging individuals who are good and average to continue performing at their best and excel. The purpose of performance appraisals is to create a working environment conducive for employees to perform to the best of their abilities in their jobs (Beardwell & Thompson, 2017). These findings resoundingly align with the beliefs of some authors in this study (Dandage et al., 2021). Human resource management practices, and in particular performance appraisals, are perceived to be unsystematically implemented in construction organisations (Dandage et al., 2021).

Considering HRM practices of individual items measured, the items for R&S, namely 'the recruitment and selection policy is in line with employment legislations of the country' and 'selection system in our organisation selects those having the desired knowledge, skills and attitudes' were perceived to have been implemented most in the surveyed construction organisations, having obtained a mean score of 4.35 and 4.14, respectively (Figure 1). These findings are paramount as they deal with one of the concerns raised in the literature that construction organisations employ less skilled workers (Ameh & Daniel, 2017; Dithebe et al., 2022). These results prove that the employment of professionals such as construction managers, project managers, architects,

surveyors and engineers means that rigorous and effective recruitment and selection practices should be implemented to have such skilled talent. The alignment of the recruitment and selection process with the country's labour legislation extricates construction organisations from incurring costs because of non-compliance. It also increases the employees' trust in the recruitment and selection process, shutting doors for any possible scepticism which could negatively hamper productivity. This could lead to a motivated, satisfied and encouraged workforce. The literature review highlights that the strength of an organisation's recruitment and selection process is rooted in adherence to the country's employment laws and in empowering HRM practitioners and line managers to implement policies with rigour, honesty and integrity (Public Service Commission [PSC], 2015).

The item for T&D 'training needs identified are realistic, useful and based on the business strategy and project needs of the organisation' ($M = 4.02$), reminds one that training and development are an investment which should yield benefits for the organisation (productivity, talent retention and company image) and positive outcomes for the employees (motivation, commitment, competence and job satisfaction), regardless of the type of industry. Commonly known as a skills audit in certain quarters, training needs analysis is the bedrock for the identification and development of effective training interventions that address the strategic skills shortages in the organisation (Mampuru et al., 2024). It is stated that training and development interventions that are misaligned with the strategic goals of the organisations are a wastage of resources (Zweni, 2023). Training in construction organisations could comprise safety training programmes, leadership, team building and communication skills, which are ideal for the creation of a safer working environment and project success (Olivia & Perera, 2024).

The lower mean scores for all the items for PEA such as 'the appraisal results are used for making decisions such as job rotation, training and compensation, promotion' ($M = 3.48$); 'employees have faith in the performance appraisal system' ($M = 3.43$); 'employees are provided performance based feedback and counselling' ($M = 3.40$) and 'the objectives of the appraisal system are clear to all employees' ($M = 3.38$), imply that the construction organisations could be experiencing unresolved performance problems despite doing well in terms of recruitment and selection, training and development, and compensation system. This means that the organisations were struggling to follow the basic principles of effective performance appraisal. These principles include linking performance appraisals to reward and remuneration strategies, making connections to promotion decisions and informing the paths for staff growth and training. Additionally, managers and subordinates should systematically set and agree on clear performance targets and goals. There is also a need for subordinates to be periodically provided feedback about their performance so that any issues can be detected and corrective actions, such as counselling, can be implemented (Adams et al., 2024; Oluwatosin et al., 2024;

Tyokwe & Naicker, 2021). This illogic and reluctance by the surveyed construction organisations to implement best performance appraisal practices could have been engendered by role conflict characterised by the construction organisations. It is pointed out that in construction multi-project environments, the existence of diverse roles, namely HRM specialists, project managers, construction site managers and line managers (such as marketing and financial managers), makes it difficult to establish the role responsible for the management of HRM activities (Bredin & Söderlund, 2011; Opatha et al., 2024). Some authors commented that the success of a construction project and the well-being of the project team are hinged on how HRM experts, project managers, line managers and project workers interact, with HRM specialists assuming duties of coordinating HRM aspects that impact project and line managers, while HRM issues pertaining to a project are overseen by both line managers and project managers (Bredin & Söderlund, 2011; Opatha et al., 2024). This could cause overlapping of roles, resulting in the delivery of sub-standard HRM services.

One-sample *t*-test and testing of the hypotheses

One-sample *t*-test results showed that PEA ($M = 3.49$; $SD = 0.60$) ($t [62] = -0.11$, $p = 0.917$) was statistically and considerably lower than the score for '3.5' indicating minimum to nil implementation of the minimum expected standards practices of performance appraisal in the surveyed construction organisations. Therefore, Hypothesis 4 was accepted. Best HRM practices of PEA are perceived as not being implemented in South African construction organisations (H4). Moreover, the one-sample *t*-test results showed that R&S ($M = 3.93$; $SD = 0.59$) ($t [62] = 5.70$, $p = 0.000$); COS ($M = 3.91$; $SD = 0.50$) ($t [62] = 6.53$, $p = 0.000$) and T&D ($M = 3.79$; $SD = 0.69$) ($t [62] = 3.29$, $p = 0.002$) were statistically and considerably higher than the score for '3.5' indicating that minimum expected standards HRM practices were implemented. Hypotheses 1, 2 and 3 were therefore rejected. Best HRM practices of R&S are perceived as not being implemented in South African construction organisations (H1). Best HRM practices of training and development (T&D) are perceived as not being implemented in South African construction organisations (H2). Best HRM practices of compensation (COS) are perceived as not being implemented in South African construction organisations (H3).

The evidence of the implementation of minimum expected standards of recruitment and selection, compensation system and training and development practices in the construction organisations in this study buttresses the assertion that these functions are core generic which should be adopted in the efficient and effective utilisation of the human capital by any organisation, regardless of industry, to achieve its goals (Armstrong & Taylor, 2020; Opatha et al., 2024).

However, the failure of the construction organisations surveyed in the study to implement effective performance appraisal systems confirms the wide belief by some authors that construction HRM processes are mostly informal,

resulting in many HRM practices being bypassed (Abuazoom et al., 2017; Babalola et al., 2022). This could also be attributed to the challenges experienced in managing HRM issues in construction, owing to overlapping roles between line managers, project managers and HRM practitioners, despite line managers and project managers lacking some of the HRM competencies because they are educated in their specialised fields. Additionally, because construction organisations are project-based, and could be involved in multi-projects at different stages and in different geographical locations, management of the personnel for relatively short periods of time could be a mammoth task (Loosemore et al., 2003; Opatha et al., 2024).

Practical implications

The results of this study have implications for organisational leaders and HRM professionals in construction organisations. The study confirmed the extent of the implementation of HRM practices in construction organisations. This is predicated on the opinions of site managers, line staff and/or admin staff, project managers, engineers, architects, commercial managers and quantity surveyors in the selected construction organisations.

The study revealed that the minimum expected standards of HRM practices in the realm of recruitment and selection, compensation and training and development are being implemented in construction organisations. This indicates that the practice of HRM could be standardised across industries in South Africa. While the belief that HRM is informally practised in construction organisations could have hampered the positive image of the construction organisations and working in construction organisations could be less attractive to some employees, the results of this study could contribute to making construction organisations a preferred working environment. The implementation of HRM in the construction industry needs therefore to encapsulate the tenets that are central to the successful delivery of HRM services as in other countries and more stable sectors. For instance, recruitment and selection mechanisms should ensure that competent employees and project team members are employed. Unethical practices such as nepotism and favouritism in recruitment and selection practices should never be tolerated (Ameh & Daniel, 2017). The compensation system should ensure that performance on an individual and team level is recognised and pay and salary are modified in accordance with the prevailing cost of living. Training and development should contribute to the successful performance of construction projects in which training programmes are focussed on modern project management techniques, health and safety protocols, and technology to ensure that employees are equipped with the competencies required for optimum performance. In the new world of work, there is a call to elevate the HRM to the boardroom with the aid of digital technologies, where strategic HRM is viewed in the context of the firm's strategy. This implies that there is no reason preventing construction organisations, like those in any other industry, from implementing digital technologies such

as robots to perform certain aspects of construction project work, as long as the implications for job security and employee well-being are appropriately managed. Instead of focussing too much on potential HRM limitations in the industry, the emphasis should be on the best ways to deliver cutting-edge HRM services.

However, it will be myopic not to acknowledge HRM limitations in construction organisations. The empirical results of this study revealed that implementing minimum expected standards of performance appraisal is challenging. These limitations need to be identified and strategies devised to overcome them as they manifest in construction organisations. Such failure to conduct performance appraisals logically could cause employees to lose faith in the performance appraisal process, resulting in negative employee-centred outcomes such as demotivation and job dissatisfaction, which can hamper project success (Beardwell & Thompson, 2017). An effective performance appraisal system is epitomised by using a relevant job evaluation criterion, agreement on performance expectations between managers and subordinates, consistence in the application of the evaluation criteria to employees in the same job category, timeous delivery of feedback and dealing with performance problems, and observance of the due process in terms of the performance appraisal system's legal and policy requirements (Adams et al., 2024). There is also a need to deal with the overlapping roles in the coordination of HRM issues between line managers, project managers and HRM practitioners where line managers or project managers may lack HRM competencies. This could be a stumbling block for administering effective performance appraisals and many other HRM issues. Line managers and project managers could be equipped with HRM knowledge through training and development.

The demographic empirical findings confirmed that there is a male-dominated culture in construction organisations, with almost three-quarters of the respondents being males as compared to females. Recruitment and selection strategies of the organisation should be revised as this will cause the organisations to face difficulties in establishing an inclusive workplace where workforce diversity and equal opportunity are advocated, rendering the workplace a regulatory non-compliant (Shikweni et al., 2019).

The outcome of this study should draw the attention of many in which it has been proven that some minimum expected standards of HRM practices are being implemented and the seemingly undesirable or negative image of the construction industry could be dwindled. As such, HRM professionals and top leaders need to explore different ways to deal with the identified HRM challenges successfully.

Limitations of the research

The demographic and sample under investigation in this study were restricted to construction organisations in South

Africa, specifically in Cape Town, which could be considered a limitation. However, most of the organisations surveyed have a nationwide footprint in South Africa.

Recommendations for future research

There is not enough research done to ascertain the perceived implementation of HRM in construction organisations (Khan & Rasheed, 2015; Opatha et al., 2024; Zavyalova et al., 2020), and this research appears to be the first study carried out in the South African construction organisations. Further research involving a larger sample can be conducted to explore how the reorganisation of HRM departments and functions can optimise the performance of construction organisations.

Conclusion

Construction organisations are compelled to implement the best HRM practices. This study reveals that minimum expected HRM standards in recruitment and selection, training and development, and compensation systems are implemented in South African construction organisations, thus contributing to the extant body of knowledge, which currently is limited. This knowledge contributes to a better understanding of the practice of HRM in construction organisations and could increase awareness among business leaders, HRM professionals, line managers, project managers and contractors regarding the importance of implementing effective HRM practices in construction organisations. This should dispel the belief that the practice of HRM in construction organisations is below the minimum expected standards but empower and strengthen HRM professionals, managers and leaders in construction organisations to forge ahead in exploring HRM solutions that can advance the performance of construction organisations in terms of project cost, quality and time while ensuring that HRM limitations are dealt with proactively.

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Data availability

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