

Factors influencing the retention of administrative employees at a public technical and vocational education and training college



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Orientation: South African higher education institutions, including technical and vocational education and training (TVET) colleges, face persistent challenges in retaining skilled employees, with turnover intentions undermining work engagement, well-being and institutional performance.

Research purpose: This study examined the factors influencing administrative staff retention at a public TVET college in Mpumalanga, South Africa.

Motivation for the study: Research on employee retention in TVET colleges has largely overlooked administrative staff. Addressing this gap provides insights into an often-neglected workforce critical to institutional stability.

Research design, approach and method: A quantitative, descriptive design was employed, using a stratified sample of 119 administrative employees at Nkangala TVET College. Data were collected through a structured, closed-ended questionnaire. Reliability was confirmed with Cronbach's alpha, and Pearson's correlations tested variable relationships.

Main findings: Rewards and recognition, job security and career development significantly predict employee retention, while job satisfaction and performance appraisal were statistically insignificant.

Practical/managerial implications: To retain administrative staff, TVET colleges should prioritise rewards and recognition as the strongest driver, alongside career development and job security, rather than relying on job satisfaction or performance appraisal.

Contribution/value added: The study advances the understanding of administrative employee retention in South African TVET colleges and informs the development of evidence-based strategies to strengthen workforce stability in the sector.

Keywords: administrative employees; TVET college; employee retention; higher education institutions; South Africa.

Introduction

Over the years, employee retention has become a major challenge for both public and private organisations worldwide, especially in highly competitive sectors where skilled employees are a critical success factor (Hanai & Pallangyo 2020). The difficulty of attracting and retaining talented individuals has been exacerbated by economic downturns and rising voluntary turnover (Mzini 2019). According to the annual human resources (HR) survey by the South African Board for People Practices (SABPP), a significant number of employees seek positions in more favourable workplaces, largely motivated by better pay, improved career opportunities and greater job satisfaction (Amushila & Bussin 2021).

South African higher education institutions (HEIs) are struggling to retain skilled employees, as many leave in search of better opportunities (Snyman & Ferreira 2023). Factors such as poor working conditions, limited career-growth opportunities, inadequate remuneration and lack of recognition highlight the need to address employee retention (Mtshali 2019). For example, employees of Nkangala Technical and Vocational Education and Training (TVET) College recently staged a protest to raise concerns about inadequate support, limited resources and a lack of career advancement opportunities. These issues have significantly hindered the professional

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growth of college staff. There is a perception that Nkangala TVET College overlooks the factors contributing to administrative employee turnover (Maseko 2016). Tsatsimpe and Pelsier (2025) further argued that lecturers in South African TVET colleges reported intentions to leave due to insufficient training, inadequate compensation and ineffective performance management, highlighting the need to examine the retention of administrative employees. Administrative staff are vital for operational efficiency, academic support and effective services; thus, retaining them is crucial for HEIs' smooth functioning and success.

Although employee retention has received considerable scholarly attention through various frameworks, variables and methodologies, it remains an ongoing challenge (Ekhsan, Badrianti & Aeni 2021). Notably, limited research has focused specifically on administrative employees within TVET colleges (Erasmus 2020). Retention research in HEIs mostly focused on academic staff and universities, with comparatively less attention to administrative and support employees (Mukwawaya 2025). Erasmus, Grobler and Van Niekerk (2015) investigated academic and support staff in HEIs and found that leadership, managerial relations, pay and organisational citizenship affect employees' intention to stay, but they did not analyse administrative staff separately, limiting the applicability of findings to this group. Similarly, Marozva et al. (2024) identified factors affecting HEIs' general staff retention, which include working environment, work-life balance, career development and rewards. However, their study provides limited insight into the unique experiences and retention factors of administrative staff, which this study seeks to address. This gap is important, as existing frameworks may not fully reflect how recognition and career advancement affect administrative employees' retention.

This study aimed to investigate the factors influencing the retention of administrative employees at a public TVET college in Mpumalanga, South Africa. A search on the Southern African Bibliography Information Network (SABINET) confirmed that such an investigation had not been conducted. Therefore, there was a clear gap in the existing knowledge that this research aimed to address. Moreover, this study contributes to the literature by extending retention frameworks to include administrative staff and providing evidence-based recommendations for improving retention strategies, institutional efficiency and staff satisfaction.

Literature review

Employee retention

Employee retention is a multifaceted phenomenon that has been defined in numerous ways by scholars (Aburub 2020). Sengputa (2023) describes employee retention as the length of time employers are able to retain their employees. In contrast, Chong et al. (2021) view employee retention as the commitment of employees to their current employer. For this study, employee retention is a strategic initiative by

organisations to retain employees for extended periods, thereby minimising the costs associated with recruiting, training and preparing new employees. This definition integrates the perspectives of Maphanga and Olivier (2025) and Pirrolas and Correia (2022), along with Schaap and Olckers (2020), and provides a practical and theoretical framework for analysing retention in the context of administrative staff. Khan et al. (2019) emphasise that employee retention is the lifeblood of organisational success.

Mzini (2019) describes employee retention within TVET colleges as the institution's ability to retain experienced staff and reduce turnover caused by resignations, retirements or career changes. Similarly, De Koker, Schutte and Barkhuizen (2022) characterise employee retention as the capacity of TVET colleges to retain skilled employees in a competitive educational environment. Mabaso and Moloi (2016) highlight the critical role of employee retention in the institutional performance of TVET colleges, while (Netswera & Rankhumise 2005) regard it as a tool for attracting and retaining highly skilled employees, essential for providing quality support to both management and staff. Consequently, colleges must develop effective retention strategies to secure and maintain a talented workforce (Musakuro & De Klerk 2021).

Factors influencing employee retention

Employees' decisions to remain with or leave an organisation are shaped by a range of factors, often evaluated through a cost-benefit lens (Kaliyamoorthy et al. 2018). Similarly, Ghani et al. (2022) emphasise the multitude of drivers affecting these choices, positioning employee retention as a strategic imperative for organisations seeking to maintain their competitiveness.

According to Bhebhe and Maphosa (2016), retention-related factors significantly influence employees' intentions to resign. This trend may be linked to the increasing availability of alternative employment opportunities, which can prompt employees to leave their current positions when faced with any form of dissatisfaction.

Sanchez (2023) highlights the importance of understanding the factors that influence employee retention, noting their significant impact on an organisation's ability to attract and retain top talent. Akala (2012) contends that numerous retention factors exert a positive influence on employees within an organisation. Sinha and Sinha (2012) argue that effective retention strategies must extend beyond traditional benefits and address the diverse needs and aspirations of employees across different generations, experience levels and educational backgrounds.

Consequently, it is vital for organisations to gain a thorough understanding of the variables that underpin employee retention and to develop effective retention strategies accordingly. The present study identified five key retention factors: job satisfaction, performance appraisal, job security,

career development and rewards and recognition, as being particularly influential within organisations. These factors are highlighted in the literature as crucial for retention. Job satisfaction boosts organisational commitment (Schaap & Olckers 2020), while performance appraisal, along with rewards and recognition, motivates employees and reinforces retention (Hatidja et al. 2024). Job security enhances loyalty and reduces turnover intentions (Ngui & Katua 2023), and career development opportunities increase engagement and organisational commitment (Schaap & Olckers 2020). These key retention factors were chosen for their empirical backing and practical significance in retaining administrative staff in organisations. Although widely studied in academic contexts, retention factors remain underexplored among administrative staff at South African TVET colleges, addressing a key knowledge gap with theoretical and practical contributions.

Theoretical framework of employee retention

To conceptualise the theoretical foundation to explain the factors influencing employee retention, Herzberg's two-factor theory was adopted. This theory is particularly well suited to the context of employee retention, as it addresses the roles of both job satisfaction and dissatisfaction.

Herzberg's two-factor theory was developed in 1959 by the American psychologist Frederick Herzberg to explain factors influencing employee motivation and retention. Giese and Avoseh (2018) cited Herzberg's theory of motivation, which distinguishes between factors that enhance or diminish employee satisfaction, namely, hygiene factors and motivators. Herzberg's theory serves as the central theoretical framework (Hur 2018). According to Mitsakis and Galanakis (2022), motivators are intrinsic factors that drive employees to perform at their best, whereas hygiene factors, such as the need to avoid unpleasant circumstances, are extrinsic. Similarly, Yousaf (2020) regards motivator factors as essential for boosting employee performance, productivity and overall job satisfaction; their absence, however, can decrease job satisfaction (Abdulhamidova 2021).

Retention studies show that motivators such as achievement, recognition and growth increase job satisfaction and commitment, reducing turnover (Shinde 2025). Career development and rewards strengthen retention (El Mountasser & Sahraoui 2025), while hygiene factors like job security and fair performance appraisals reduce dissatisfaction (Abdulhamidova 2021). A study by Thant and Chang (2021) found that insufficient hygiene factors, such as company policy, supervision, salary and working conditions, lead to dissatisfaction, even though they do not actively motivate employees. Conversely, the presence of intrinsic factors such as recognition, responsibility and opportunities for advancement in the workplace leads to increased happiness among employees (Raj & Ling-Meng 2024). Employees with high self-esteem tend to be more satisfied due to intrinsic workplace rewards. It is therefore important for decision makers to align the organisational goals and objectives by ensuring work is both rewarding and satisfying for employees (Reduan, Sabli & Adenan 2023).

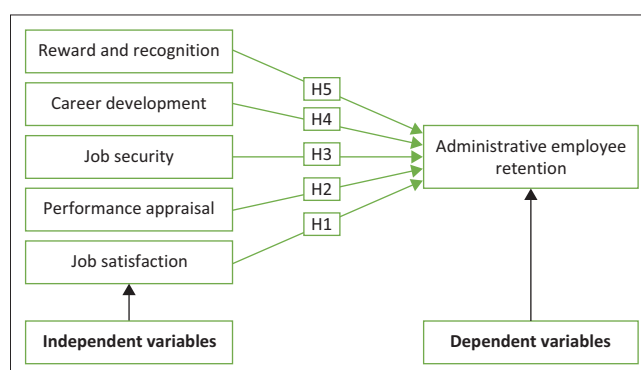
Tezel (2023) critiques Herzberg's theory, highlighting the existence of diverse sources of job satisfaction and dissatisfaction. Kinyanjui (2017) concluded that motivation factors such as the working environment, compensation and job security are key determinants in retaining employees within an organisation.

Applying Herzberg's two-factor theory to the context of TVET college employees is significant, as it demonstrates the importance for management not only to address hygiene factors to encourage employee retention, but also to integrate both motivation and hygiene elements in order to reduce employee turnover. It is evident that ensuring the presence of these factors is vital for preventing dissatisfaction and supporting retention within TVET colleges (Nikisi et al. 2025).

Proposed conceptual framework

According to Varpio et al. (2020), a conceptual framework provides an overview of principles and ideas that enable the researcher to understand and develop the circumstances under investigation, as well as to communicate them effectively. Various approaches have been applied in the study of employee retention, with each addressing different dimensions of intentional employee retention. The conceptual framework underpinning this study is grounded in Herzberg's two-factor theory, developed in 1959 by the American psychologist Frederick Herzberg. This theory proposes that employee retention is influenced by two sets of factors: motivator factors, such as job satisfaction, career development and rewards and recognition, and hygiene factors, such as job security (Alrawahi et al. 2020).

The proposed conceptual model framework presented in Figure 1 illustrates that the retention of administrative employees is influenced by factors such as career development, job security, performance appraisal, rewards and recognition and job satisfaction, each of which may exert both positive and negative effects. When employees experience dissatisfaction with management, they are more inclined to leave the organisation, whereas fair treatment increases the likelihood of them remaining with the organisation. It is evident from the literature review by Behera (2024), Rahman et al. (2017), Dias et al. (2022) and Sanchez (2023) that employee satisfaction and engagement



H, hypothesis.

FIGURE 1: Conceptual framework for administrative employee retention.

can positively influence retention strategies, thereby contributing to favourable outcomes for employee retention.

Drawing on the factors identified in the underlying theories, a conceptual framework comprising five hypotheses was developed. These hypotheses were formulated to empirically test the relationships between the identified factors and employee retention.

Development of hypotheses

Job satisfaction and employee retention

Various studies have demonstrated a strong relationship between job satisfaction and employee retention. Achieving job satisfaction is widely recognised as essential to an organisation's success (Irabor & Okolie 2019). Although prior research has established a link between job satisfaction and employee retention, empirical evidence regarding its direct influence within public educational institutions remains limited, highlighting a need for investigation (Patrichi et al. 2025).

When employees experience job satisfaction, they are generally more productive, more loyal to the organisation, less likely to leave, and demonstrate greater motivation, highlighting the critical role of job satisfaction in employee retention (AlQudah et al. 2023). On this basis, we hypothesise that:

H1: Job satisfaction has a significant positive impact on employee retention.

Performance appraisal and employee retention

According to Aleem and Bowra (2019), performance appraisal plays a significant role in enhancing employee retention. When appraisals are conducted fairly, employees are more likely to remain committed and stay with the organisation for a longer period. While performance appraisal systems are linked to job satisfaction and individual performance, there is a notable lack of empirical research directly exploring effects on employee retention, especially across diverse organisational settings (Mampuru, Mokoena & Isabirye 2024).

Sabo and Suleiman (2022) argue that unfair appraisals demotivate employees, leading to reduced commitment and lower retention rates. Similarly, Rakhra (2018) concludes that performance appraisals are significantly related to employee retention, highlighting the importance of fair and effective appraisal systems. An effective performance appraisal enhances employee satisfaction by providing constructive organisational feedback and fostering understanding. Accordingly, the following hypothesis is proposed:

H2: Performance appraisal positively affects employee retention.

Job security and employee retention

According to Kaliyamoorthy et al. (2018), organisations employ job security as a key retention strategy to sustain employee commitment and loyalty.

Employees who feel secure in their positions are more likely to remain with the organisation for longer periods. Similarly, Bibi, Ahmad and Majid (2016) argue that job security positively influences employee retention, as employees with a strong sense of organisational connection are more inclined to stay. Job security supports employee well-being; few studies have isolated its independent effect on retention, particularly across varying contexts, such as public versus private sectors (Vasudevan et al. 2024).

Job security, therefore, emerges as a crucial factor in an employee's decision to either remain with or leave an organisation. When employees feel secure, they are more likely to continue their employment, whereas uncertainty about job satisfaction may drive them to seek employment opportunities elsewhere (Aman-Ullah et al. 2021). Consequently, the study posits that:

H3: Job security positively affects employee retention.

Career development and employee retention

According to Singh (2019), career development is a critical factor in organisational efforts to retain their employees.

Umpusinga et al. (2024) emphasise its positive influence on employee retention, noting that career development initiatives strengthen employee commitment. Such programmes enhance employees' skills and competencies, enabling them to adapt more effectively to their work environment. Career development is a key Human Resource Management (HRM) practice; however, research emphasises its links to satisfaction and engagement over direct retention effects, especially in the education, public service and TVET sectors (Igbinoba et al. 2022). By offering opportunities for training and development, organisations can foster a more competent and engaged workforce which in turn contributes to improved organisational performance (Mazanec 2022). In line with this reasoning, the following hypothesis is formulated:

H4: Career development positively affects employee retention.

Rewards and recognition and employee retention

Mdhlalose (2024) emphasises the significant relationship between rewards and recognition and employee retention. Providing employees with opportunities to showcase their talents substantially increases their likelihood of remaining with the organisation.

Similarly, Babakarewa et al. (2024) found that awarding bonuses for exceptional performance enhances employee satisfaction, which in turn contributes to longer retention. According to Adesina and Egbuta (2025), rewards and recognition enhance employee engagement, satisfaction and retention. However, few studies have explored their direct impact on retention across diverse settings, particularly in public or educational institutions.

Rewards and recognition also serve to encourage and motivate employees, thereby strengthening their commitment

to the organisation (Mngomezulu et al. 2015). Accordingly, the following hypothesis is proposed:

H5: Rewards and recognition positively affects employee retention.

The five hypotheses (H1–H5) form the basis of the conceptual framework in Figure 1, each representing a factor influencing employee retention. Their integration provides a structure for testing the relationships among these variables, guiding the empirical analysis and aligning the study with its research design. The next section outlines the methodology used to test the framework.

Research methods and design

This section outlines the research methodology employed to examine the factors influencing the retention of administrative employees at a public TVET college in Mpumalanga, South Africa.

Research philosophy

This study was guided by two core philosophical assumptions: objectivist ontology and positivist epistemology (Kirongo & Odoyo 2020). Ontological and epistemological positions are central to the research process, as they provide clear guidance on how studies are conceptualised and conducted (Ylönen & Aven 2023). The adoption of objectivism was based on the premise that employee retention is a real phenomenon that can be objectively examined by identifying the factors that influence it. A positivist epistemological stance was therefore applied, enabling the measurement of employee retention factors through empirical, data-driven methods designed to test the relationships between independent and dependent variables.

Research approach

This study adopted a quantitative research design, using a survey to collect data on the factors influencing employee retention at the selected HEI.

As noted by Rahman (2020), quantitative research enables the collection of data from larger samples, thereby providing a more comprehensive understanding of a particular phenomenon. A descriptive research design was employed to ensure representativeness and to capture respondents' opinions (Ansari et al. 2022). This approach assisted the researcher in obtaining and accurately describing the respondents' views.

Population and sampling

The target population for this study comprised the administrative employees of Nkangala TVET College. According to the institution's HR department, the college employed 300 administrative staff members ($N = 300$) across five campuses and the head office. From this population, 131 employees were excluded, resulting in a

final target sample of 169 respondents. A stratified sampling technique was employed to ensure adequate representation of each subgroup and to enhance the efficiency of the sample design (Howell et al. 2020). The Raosoft sample calculator was used to determine the appropriate sample size based on a 5% margin of error and a 95% confidence interval. The study sample included only administrative staff members with more than 5 years of service (Raosoft 2023). Stratum-specific weights were applied to determine the proportion of participants from each subgroup, ensuring balanced representation. Table 1 outlines the stratified sampling distribution across the six campuses.

Data collection

This study employed a structured, closed-ended questionnaire to collect data from respondents. The questionnaire was divided into three sections:

- Section A captured the demographic information, including gender, age, highest academic qualification and years of employment at Nkangala TVET College.
- Section B contained 13 items related to employee retention. Respondents indicated their level of agreement with each statement using a four-point Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = agree and 4 = strongly agree.
- Section C consisted of 30 items focused on the factors influencing employee retention, namely: job satisfaction (6), performance appraisal (7), job security (6), career development; (7) and rewards and recognition (4). The same four-point Likert scale was applied to measure responses.

To enhance the robustness and validity of the research instrument, the questionnaire was reviewed by a statistician and study leaders and then piloted with 10 administrative employees, distinct from the main study's respondent pool. The survey was distributed physically by a fieldworker to sub-campuses, Witbank, Mpondozankomo and the head office. However, due to a low response rate, only 45 questionnaires were eventually returned, and an online approach was subsequently adopted. In total, 119 completed questionnaires were received, yielding a response rate of 70.41%. The rate is considered satisfactory and aligns with Mailu et al. (2021), who regard such a level of participation as acceptable even within relatively small respondent groups.

TABLE 1: Stratified sampling calculation ($N = 169$).

Nkangala college campuses	Calculation of stratified sampling	Calculated sample size†
Witbank	$60/300 \times 169$	33.80
Middleburg	$35/300 \times 169$	19.72
Waterval Boven	$25/300 \times 169$	14.08
CN Mahlangu	$25/300 \times 169$	14.08
Mpondozankomo	$50/300 \times 169$	28.17
Head office	$105/300 \times 169$	59.15

†, the number of participants for each location was determined by rounding each calculated sample size to the nearest tenth.

Data analysis

This study employed both descriptive and inferential statistics to analyse the data. Descriptive statistics were presented using frequency distributions and percentages. The research data were first coded and recorded in Microsoft Excel before being imported into the latest version of the Statistical Package for the Social Sciences (SPSS, version 29.0). For inferential analysis, the study applied analysis of variance techniques and Pearson's correlation and linear regression analysis coefficient to examine the relationships between employee retention and the identified retention factors. In addition, exploratory factor analysis (EFA) was employed as a data-driven approach to identify patterns within the variables and to explain the correlation among them (Mohamed et al. 2023).

Reliability analysis

The reliability of the study was assessed using Cronbach's alpha coefficient to evaluate the internal consistency of the questionnaire.

The analysis produced an overall Cronbach's alpha value of 0.883, which exceeds the threshold for good reliability. This result indicates a strong internal consistency, with the items demonstrating good intercorrelation and effectively measuring the intended construct.

Ethical considerations

A gatekeeper letter was obtained from the Nkangala TVET College (Ref: R0007/2023), granting permission to conduct the study. Full ethical approval was subsequently secured from the Tshwane University of Technology (TUT) Human Research Ethics Committee (HREC) under the Faculty of Management Sciences. The ethics approval number is REC2024=04=017 (MS). The study complied with institutional and international ethical standards. Participation was voluntary and based on informed consent, with respondents assured of their right to withdraw without penalty. Anonymity, confidentiality and secure data storage were maintained, and the information was used exclusively for academic purposes.

Results

This section provides a descriptive analysis of the respondents' demographics and reports the correlation and exploratory analyses used to assess relationships among the constructs influencing employee retention at the selected HEI.

Before presenting the findings, the analysis accounted for gender, age, education level, and work experience to ensure the effects of the main predictors on employee retention and to evaluate the independence of demographic differences. By controlling identified factors, the results highlighted distinct contributions of job satisfaction, job security, career development, rewards and recognition and performance appraisal to retention outcomes.

Respondents' demographics

The demographic variables analysed in this study included gender, age, level of education and work experience (see Table 2). The results show that the majority of respondents were women (57.98%), and most respondents were aged 30–39 years (43.70%). In terms of education, 36.13% of the administrative employees held a national diploma. About work experience, most respondents (65.55%) had been employed at Nkangala TVET College for between 5–10 years.

Pearson's correlation analysis of the constructs

Pearson's correlation coefficient was employed to examine the relationship between employee retention and its influencing factors. As shown in Table 3, all correlations with employee retention were significant at $p < 0.05$, indicating meaningful relationships. The strongest positive correlation was found between employee retention and rewards and recognition ($r = 0.589$, $p = 0.001$), followed by job security ($r = 0.444$, $p = 0.001$), job satisfaction ($r = 0.425$, $p = 0.01$) and career development ($r = 0.418$, $p = 0.001$). A weaker but statistically significant relationship was observed between employee retention and performance appraisal ($r = 0.288$, $p = 0.002$).

Exploratory factor analysis

According to Ullah et al. (2023), EFA employs measures, such as the Kaiser-Meyer-Olkin (KMO) test, Bartlett's test of sphericity, communalities, total variance explained, rotated component matrix, composite reliability, as well as convergent validity and discriminant validity assessments, to determine the factorability of data.

TABLE 2: Demographic profile of respondents ($N = 119$).

Variables	<i>n</i>	%	Cumulative %
Gender			
Man	50	42.02	42.02
Woman	69	57.98	100.00
Age (years)			
21–29	25	21.01	21.01
30–39	52	43.70	64.71
40–49	28	23.53	88.24
50–59	13	10.92	99.16
≥ 60	1	0.84	100.00
Highest academic qualification			
Grade 12 or matric	1	0.84	0.84
N6 certificate	6	5.04	5.88
National diploma	43	36.13	42.02
Bachelor's degree or BTech or Advanced diploma	39	32.77	74.79
Honours degree or Postgraduate diploma	22	18.49	93.28
Master degree or MTech	7	5.88	99.16
Doctoral degree or DTech	1	0.84	100.00
Work experience at Nkangala TVET College (years)			
5–10	78	65.55	65.55
11–20	25	210.10	86.55
21–30	15	12.61	99.16
31–40	1	0.84	100.00

TVET, technical and vocational education and training.

TABLE 3: Correlation of constructs.

Correlations	Employee retention	Job satisfaction	Performance appraisal	Job security	Career development	Rewards recognition
Employee retention						
Pearson correlation	1	-	-	-	-	-
Sig. (two tailed)	-	-	-	-	-	-
Job satisfaction						
Pearson correlation	0.425**	1	-	-	-	-
Sig. (two tailed)	< 0.001	-	-	-	-	-
Performance appraisal						
Pearson correlation	0.288**	0.220*	1	-	-	-
Sig. (two tailed)	0.002	0.016	-	-	-	-
Job security						
Pearson correlation	0.444**	0.322**	0.331**	1	-	-
Sig. (two tailed)	< 0.001	< 0.001	< 0.001	-	-	-
Career development						
Pearson correlation	0.418**	0.301**	0.454**	0.436**	1	-
Sig. (two tailed)	< 0.001	< 0.001	< 0.001	< 0.001	-	-
Rewards recognition						
Pearson correlation	0.589**	0.577**	0.535**	0.456**	0.419**	1
Sig. (two tailed)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-

*, Correlation is significant at the 0.05 level (two tailed).

**, Correlation is significant at the 0.01 level (two tailed).

In this study, the KMO value was 0.800, exceeding the threshold of 0.70, thereby confirming the adequacy of the dataset for factor analysis. Furthermore, Bartlett's test of sphericity produced a p -value of 0.001, which falls below the 5% significance level, indicating that the correlation among variables was suitable for factor analysis (Sudershan Reddy & Kulshrestha 2019).

Communalities

Communalities represent the proportion of variance in each variable explained by the extracted factors (Karimian & Chahartangi 2024). A communality value above 0.5 is generally considered acceptable, indicating weak and less reliable items. In this study, items ER2, ER5, ER6, ER7, ER9, ER12 and ER13 recorded communality values below 0.5 and were therefore excluded from further analysis.

As shown in Table 4, the remaining 36 items displayed communality values above 0.5, confirming their suitability for inclusion in the factor structure.

Total variance explained

Table 5 presents the distribution of variance across the 36 potential factors. Notably, eight components initially recorded an eigenvalue greater than 1.0, a widely used criterion for identifying factors that account for a meaningful proportion of variance (Sappaile, Abeng & Nuridayanti 2023). Factors with eigenvalues below 1.0 explain less variance than a single item, rendering them less useful in the analysis. In this study, the six extracted factors accounted for approximately 60.45% of the total variance across the 36 variables, thereby capturing a substantial portion of the dataset's variability. The first component explained 17.42% of the total variance (eigenvalue of 11.20), the second 12.57% (eigenvalue of

4.60), the third 11.44% (eigenvalue of 2.77), the fourth 9.94% (eigenvalue of 2.21), the fifth 7.81% (eigenvalue of 1.66) and the sixth 7.25% (eigenvalue of 1.45).

Rotated component matrix

The rotation component matrix consists of rotated component loadings, which indicate both the weight of each variable on a component and the correlation between variables and their respective components (Shrestha 2021). For an acceptable rotation method, items should load above 0.5, as loadings below the threshold are considered weak and are typically removed (Howard 2023). In this study, small coefficients with absolute values below 0.5 were suppressed. As shown in Table 6, 17 items (ER2, ER5, ER6, ER7, ER8, ER9, ER12, ER13, RR1, RR2, RR3, RR4, JS_04, JS_05, JS_06, CD_1 and CD_2) were removed, resulting in five components. Notably, all rewards and recognition constructs (RR1–RR4) loaded below 0.5, indicating that they did not statistically contribute to employee retention in this context.

Composite reliability and convergent validity analysis

As stated by Haji-Othman and Yusuff (2022), composite reliability (CR) as a measure of internal consistency is used to estimate reliability, while average variance extracted (AVE) is used to assess convergent validity. Huang et al. (2013) suggest that desirable outcomes are demonstrated when AVE and CR values exceed 0.50 and 0.70, respectively. In this study, the calculations of CR and AVE were performed following Aydoğdu (2023), as presented in Table 7. The CR values ranged from 0.795 to 0.950, while AVE values ranged from 0.532 to 0.732. These results confirm that all factors met the required thresholds and that strong convergent validity was achieved.

TABLE 4: Communalities.

Participant code	Participant responses	Initial	Extraction
Employee retention			
ER1	I feel satisfied with my workplace.	1000	0.551
ER3	I want to stay with my organisation because there would be a salary increase for my hard work.	1000	0.546
ER4	I want to stay with my organisation because the job description matches my skills.	1000	0.528
ER8	If I wanted to move jobs, I would first seek opportunities within this organisation.	1000	0.669
ER10	I see myself working in this organisation for a long time.	1000	0.657
ER11	I would always choose to work for this organisation if I were to start again.	1000	0.611
Job satisfaction			
Job_S1	I am satisfied with the benefits that I receive from my organisation.	1000	0.773
Job_S2	I am satisfied with the salary that I receive from my organisation.	1000	0.653
Job_S3	My job gives me social status.	1000	0.649
Job_S4	My job gives me a sense of security.	1000	0.674
Job_S5	I am satisfied with the organisation's compensation based on my administration position.	1000	0.758
Job_S6	I am paid fairly for the administration work I do in my organisation.	1000	0.762
Rewards and recognition			
RR_1	When I do a good job, I receive the recognition that I deserve.	1000	0.517
RR_2	At work, I am given the opportunity to do my best.	1000	0.648
RR_3	I am well aware of what is expected from me.	1000	0.523
RR_4	I am satisfied at work because there are bonuses given for excellent performance.	1000	0.578
Performance appraisal			
PP_1	The organisation evaluates my performance on a regular basis.	1000	0.749
PP_2	The procedure of the performance appraisal is transparent.	1000	0.719
PP_3	The process of the performance appraisal is fair.	1000	0.844
PP_4	Before the evaluation period starts, the goals of performance appraisals are explained.	1000	0.692
PP_5	Performance evaluation goals are mutually decided.	1000	0.847
PP_6	The process of the performance appraisal is unbiased.	1000	0.828
PP_7	The process of the performance appraisal gives enough scope to measure the achievable goals.	1000	0.798
Job security			
JS_01	I feel secure in terms of my job.	1000	0.627
JS_02	I am very confident that I will be able to keep my job.	1000	0.705
JS_03	I have a feeling that I am a part of the organisation.	1000	0.560
JS_04	I feel uncertain about the future of my job.	1000	0.514
JS_05	I am familiar with my job environment.	1000	0.500
JS_06	I fear that I might lose my job.	1000	0.513
Career development			
CD_1	I think my specific skills are important for success in my current field.	1000	0.560
CD_2	I have made progress in improving my specific skills as I started working in my current job.	1000	0.665
CD_3	The leadership in my organisation strongly supports the career development of staff.	1000	0.679
CD_4	Staff understand the career development philosophy of the organisation.	1000	0.766
CD_5	Staff understand their role in their career development.	1000	0.774
CD_6	Career development is supported through well-executed organisational policies.	1000	0.786
CD_7	The performance appraisal process in my organisation places sufficient emphasis on career development.	1000	0.699

Note: Extraction method: principal component analysis.

Discriminant validity test

Lim (2024) explained that discriminant validity ensures that each study measure is distinct, not captured by other constructs. As reflected in Table 7, the correlations between the constructs were all less than 1, and each correlation coefficient was lower than the square root of AVE. These results confirm the discriminant validity of the constructs.

Regression analysis statistics

Regression model summary in Table 8 shows that job satisfaction, performance appraisal, job security, career development and rewards and recognition at Nkangala TVET College were predictors of employee retention. Prediction strength was evaluated using the *R*-squared value. The higher the *R*-squared value, the stronger the

predictive power of the model (Ozili 2023). Keer, Lohiya and Chouhan (2023) maintain that a good model may have a low *R*-square, while a biased model can have a high *R*-square. The *R*-squared in Table 8 revealed that the model only explained approximately 41.8% of the variance within the retention rate. This implies that the model has a moderate correlation, and the remaining 58.2% of the variance is unexplained, which suggests that other factors not included in the model also contribute to variations in employee retention. But it is still regarded as acceptable.

Regression analysis was employed to predict the relationship between employee retention and its influencing factors. As shown in Table 9, certain variables had a significant effect on employee retention within the organisation ($B = 18.927$, $p = 0.001$), indicating that the overall regression model was

TABLE 5: Total variance explained.

Component	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11 209	31 137	31 137	11 209	31 137	31 137	6273	17 425	17 425
2	4600	12 777	43 914	4600	12 777	43 914	4525	12 570	29 995
3	2776	7712	51 627	2776	7712	51 627	4120	11 444	41 439
4	2211	6143	57 769	2211	6143	57 769	3580	9944	51 383
5	1666	4628	62 397	1666	4628	62 397	2813	7814	59 198
6	1459	4054	66 451	1459	4054	66 451	2611	7254	66 451
7	1037	2880	69 332	-	-	-	-	-	-
8	1004	2788	72 120	-	-	-	-	-	-
9	0.893	2480	74 600	-	-	-	-	-	-
10	0.833	2313	76 913	-	-	-	-	-	-
11	0.810	2250	79 163	-	-	-	-	-	-
12	0.708	1967	81 130	-	-	-	-	-	-
13	0.597	1658	82 787	-	-	-	-	-	-
14	0.568	1577	84 365	-	-	-	-	-	-
15	0.534	1483	85 847	-	-	-	-	-	-
16	0.507	1408	87 256	-	-	-	-	-	-
17	0.467	1298	88 554	-	-	-	-	-	-
18	0.429	1191	89 745	-	-	-	-	-	-
19	0.398	1104	90 850	-	-	-	-	-	-
20	0.363	1009	91 859	-	-	-	-	-	-
21	0.340	0.945	92 804	-	-	-	-	-	-
22	0.317	0.880	93 684	-	-	-	-	-	-
23	0.315	0.876	94 560	-	-	-	-	-	-
24	0.283	0.785	95 344	-	-	-	-	-	-
25	0.244	0.678	96 022	-	-	-	-	-	-
26	0.207	0.574	96 596	-	-	-	-	-	-
27	0.188	0.523	97 119	-	-	-	-	-	-
28	0.182	0.506	97 626	-	-	-	-	-	-
29	0.167	0.463	98 089	-	-	-	-	-	-
30	0.142	0.395	98 484	-	-	-	-	-	-
31	0.129	0.359	98 843	-	-	-	-	-	-
32	0.111	0.309	99 152	-	-	-	-	-	-
33	0.102	0.284	99 435	-	-	-	-	-	-
34	0.078	0.216	99 651	-	-	-	-	-	-
35	0.075	0.207	99 858	-	-	-	-	-	-
36	0.051	0.142	100 000	-	-	-	-	-	-

Note: Extraction method: principal component analysis.

significant despite the insignificance of some individual factors. The strongest contributor was found between employee retention rewards and recognition, showing a positive relationship with employee retention ($B = 0.820$, $p = 0.001$), followed by career development ($B = 0.196$, $p = 0.039$), and job security ($B = 0.320$, $p = 0.045$). These findings revealed statistically significant predictors, given that their p -values were below the 0.05 threshold. However, job satisfaction ($B = 0.90$, $p = 0.356$) and performance appraisal ($B = -0.88$, $p = 0.239$) p -values were above 0.05 and considered statistically insignificant. These results support the hypothesis that at least one beta coefficient differs from zero, indicating the model's explanatory value. Job security, career development and rewards and recognition were significantly related to employee retention, suggesting that administrative employees experiencing these factors are more likely to remain with the organisation. In contrast, job satisfaction and performance appraisal were statistically insignificant in relation to retention, suggesting employees experiencing these factors are more likely to leave the organisation.

Oke, Akinkunmi and Etebefia (2019) regard tolerance as the inverse of the variance inflation factor (VIF). A VIF value > 5 indicates the presence of multicollinearity. Ideally, the VIF should not exceed 5, and the tolerance should not drop below 0.2. Kyriazos and Poga (2023) state that when multicollinearity is detected, it is significant to identify two highly correlated variables, one of which must be removed from the model. As per the collinearity statistics shown in Table 9, tolerance ranged between 0.460 and 0.716, and the VIF ranged from 2.174 to 1.396, which are well within acceptable limits. Therefore, no significant multicollinearity was observed in the model.

Discussion

The findings of this study offer valuable insights into the factors influencing the retention of administrative employees at a selected HEI. Despite often being overlooked, administrative employees play a vital role within organisations. They are indispensable resources, with responsibilities that vary according to their duties and organisational structure. The

TABLE 6: Rotated component matrix.

Participant code	Component				
	1	2	3	4	5
ER1	-	-	0.572	-	-
ER3	-	-	0.553	-	-
ER4	-	-	0.607	-	-
ER8	-	-	0.804	-	-
ER10	-	-	0.749	-	-
ER11	-	-	0.673	-	-
Job_S1	-	0.823	-	-	-
Job_S2	-	0.779	-	-	-
Job_S3	-	0.506	-	-	-
Job_S4	-	0.632	-	-	-
Job_S5	-	0.831	-	-	-
Job_S6	-	0.791	-	-	-
PP_1	0.862	-	-	-	-
PP_2	0.804	-	-	-	-
PP_3	0.859	-	-	-	-
PP_4	0.813	-	-	-	-
PP_5	0.883	-	-	-	-
PP_6	0.877	-	-	-	-
PP_7	0.886	-	-	-	-
JS_01	-	-	-	-	0.836
JS_02	-	-	-	-	0.849
JS_03	-	-	-	-	0.634
CD_3	-	-	-	0.725	-
CD_4	-	-	-	0.852	-
CD_5	-	-	-	0.846	-
CD_6	-	-	-	0.810	-
CD_7	-	-	-	0.695	-

ER, employee retention; job_S, job satisfaction; PP, performance appraisal; JS, job security; CD, career development.

study identified significant and insignificant relationships between employee retention and key retention factors, as demonstrated by the regression analysis coefficients.

The first hypothesis (H1) predicted a statistically insignificant relationship between job satisfaction and employee retention, with a regression coefficient $\beta = 0.083$, with a p -value of 0.365. This indicates that administrative employees were not satisfied with aspects such as benefits, social status, sense of security, administration position and fair remuneration. These results are supported by Francess, Iddagoda and Dissanayake (2022) who also found a substantial link between job satisfaction and employee retention. Contrary, Xuecheng, Iqbal and Saina (2022) reported a positive influence of job satisfaction on employee retention in a hospital context. Collectively, these findings highlight the need for HEIs to implement strategies that enhance job satisfaction to improve the retention of administrative employees.

The second hypothesis (H2) of the research predicted a negative relationship between employee retention and performance appraisal, with a regression analysis coefficient $\beta = -0.107$, with a p -value of 0.239. This suggests that

TABLE 8: Regression model summary.

Model	R^2	R square	Adjusted R square	Std. error of the estimate
1	0.646†	0.418	0.392	3.324

R , multiple correlation coefficient; Std., standard deviation.

†, Predictors: (Constant), Rewards_Recognition, Career_Development, Job_Security, Job_Satisfaction, Performance_Appraisal; ‡, Dependent variable: Employee_Retention.

TABLE 7: Estimation of composite reliability, average variance extracted and square correlation.

Latent variable	Observed variable	Standardised loading	$1-\lambda^2$	λ^2	Composite reliability (CR)	Average variance extracted (AVE)	Square correlation (AVE)
Employee retention	ER1	0.572	0.673	0.327	0.795	0.532	0.730
	ER3	0.553	0.694	0.306			
	ER4	0.607	0.632	0.368			
	ER8	0.804	0.354	0.646			
	ER10	0.749	0.547	0.453			
	ER11	0.673	0.439	0.561			
Job satisfaction	Job_S1	0.823	0.323	0.677	0.874	0.542	0.736
	Job_S2	0.779	0.393	0.606			
	Job_S3	0.506	0.744	0.256			
	Job_S4	0.632	0.601	0.399			
	Job_S5	0.831	0.309	0.691			
	Job_S6	0.791	0.374	0.625			
Performance appraisal	PP_1	0.862	0.257	0.743	0.950	0.732	0.855
	PP_2	0.804	0.354	0.646			
	PP_3	0.859	0.262	0.738			
	PP_4	0.813	0.339	0.661			
	PP_5	0.883	0.220	0.780			
	PP_6	0.877	0.231	0.769			
	PP_7	0.886	0.215	0.785			
Job security	JS_01	0.836	0.301	0.698	0.820	0.607	0.779
	JS_02	0.849	0.279	0.721			
	JS_03	0.634	0.598	0.402			
Career development	CD_3	0.725	0.474	0.526	0.891	0.621	0.788
	CD_4	0.852	0.274	0.725			
	CD_5	0.846	0.284	0.716			
	CD_6	0.810	0.344	0.656			
	CD_7	0.695	0.517	0.483			

TABLE 9: Regression analysis statistics.

Model		Unstandardised coefficients		Standardised coefficients			Collinearity statistics	
		<i>B</i>	Std. error	Beta	<i>T</i>	Sig.	Tolerance	VIF
1	(Constant)	18 927	2380	-	7952	< 0.001	-	-
	Job satisfaction	0.090	0.097	0.083	0.927	0.356	0.643	1556
	Performance appraisal	-0.088	0.074	-0.107	-1184	0.239	0.632	1581
	Job security	0.320	0.158	0.172	2025	0.045	0.716	1396
	Career development	0.196	0.094	0.181	2084	0.039	0.683	1464
	Rewards and recognition	0.820	0.196	0.444	4192	< 0.001	0.460	2174

B, unstandardised regression coefficient; Std., standard deviation; *T*, *t*-statistic; Sig., significance; VIF, variance inflation factor.

administrative employees perceived performance appraisal systems as unfair, lacking transparency and biased. Komen and Ong'injo (2024) also found that performance appraisal significantly improves service delivery at TVET institutions. These findings highlight the need for implementing effective HR practices at TVET colleges to retain employees and keep pace with emerging trends that enhance organisational performance.

The third hypothesis (H3) of the research predicted a positive relationship between job security and employee retention in the public TVET college, with a regression analysis coefficient $\beta = 0.172$, with a *p*-value of 0.045. This suggests that the administrative staff felt secure, confident and integrated within the organisation. This finding is consistent with the findings of Magaji, Akpa and Ogundiwin (2021), who reported a strong positive association between job security and employee retention at a private university in Ogun State, south-western Nigeria. Therefore, HEIs in South Africa may benefit from fostering a secure and supportive environment that promotes a sense of belonging, familiarity, clarity and reassurance, ultimately enhancing administrative employee retention and workforce stability.

The fourth hypothesis (H4) of the research predicted a positive relationship between career development and employee retention in the public TVET college, with a regression analysis coefficient $\beta = 0.181$, with a *p*-value of 0.039. This provides strong evidence that the leadership of Nkangala TVET College actively supported staff development, and that administrative employees had a clear understanding of the organisation's philosophy and purpose. Such support was reinforced through organisational policies and a performance appraisal system that placed adequate emphasis on professional growth. These findings align with those of Ali, Kirimi and Muema (2022), who reported a positive relationship between career development and employee retention in Kenya's state corporations. Similarly, Ferdiana, Khan and Ray (2023) identified a significant effect of career development on employee retention among university staff. Collectively, these findings highlight the importance of HEIs prioritising the career growth of administrative employees.

The fifth hypothesis (H5) indicated a positive relationship between rewards and recognition and employee retention, with a regression analysis coefficient $\beta = 0.444$. Within the context of Nkangala TVET College, this outcome may

imply that administrative employees were adequately recognised, empowered to perform optimally, clearly informed about performance expectations or satisfied with performance-related bonuses, factors that could contribute to higher retention levels. These results support those of Yen, Kiat and Wee Lau (2022), who found a positive correlation between monetary rewards and employee retention in the private higher education sector. Similarly, Sinniah et al. (2019), in their study on employee retention at a Malaysian HEI, reported a significant positive effect of rewards and recognition. Collectively, these findings highlight the need for Nkangala TVET College to realign its recognition practices and implement a more effective reward and recognition framework that better addresses the needs of administrative employees. Although the regression was statistically significant, enhancing recognition strategies may nonetheless contribute help to improve staff retention and contribute to a more stable workforce.

Limitations

As with similar studies, this research was constrained by the use of stratified sampling with a relatively small sample size of 119 administrative employees. Consequently, the extent to which the findings can be generalised to a wider population beyond the institution is limited. Furthermore, the college does not have independent remuneration policies, as it adheres to the guidelines set by the Department of Higher Education, Science and Innovation. While the findings were suitable for the purposes of this study, they may not be generalisable to all colleges in South Africa. In addition, the study employed a single research approach, which may have restricted a deeper exploration of employee experiences and perceptions. These limitations present opportunities for future research, particularly through the application of qualitative methods that could provide richer insights.

Management and practical implications

This study offers valuable insights for management and practice within TVET colleges. It emphasises the importance of prioritising rewards and recognition (the strongest driver), alongside career development and job security, as core components of HR strategies directed at retaining administrative employees. Retention initiatives should focus on these high-impact factors, which significantly influence

employees' decisions to remain with the institution. While job satisfaction and performance appraisal showed limited influence, the findings underscore the need for targeted training and professional development initiatives that align with the key retention drivers identified. By fostering employee growth and promoting a sense of belonging, TVET colleges can enhance organisational commitment. These insights are particularly valuable for decision-makers within TVET colleges and HEIs, as they provide a foundation for developing effective employee retention strategies and investing in initiatives that improve job satisfaction and career development.

Conclusion

The primary objective of this study was to examine the factors influencing the retention of administrative employees in a public TVET college in Mpumalanga.

A quantitative research approach was adopted, utilising a descriptive design and a structured, closed-ended questionnaire. The data were coded and recorded in a Microsoft Excel spreadsheet before being imported into SPSS for analysis. Both descriptive and inferential statistical methods were applied to assess the correlations among the factors influencing employee retention. The study's findings highlight the critical factors influencing the retention of administrative employees.

Job satisfaction was found to have a negative effect on retention, suggesting that administrative employees who were not content in their roles demonstrated lower productivity and weaker organisational loyalty, making them more likely to leave the institution. Employees also perceived performance appraisal systems as not fair, which further reinforced their choice to leave the organisation over the longer term. Job security emerged as another significant factor, with employees who felt secure in their roles showing a greater likelihood of staying. Career development opportunities were also influential, indicating that Nkangala TVET College provides administrative employees with meaningful prospects for growth. Rewards and recognition functioned as motivating factors, as employees reported feeling sufficiently rewarded and therefore less likely to seek opportunities elsewhere. Taken together, these retention factors underscore the importance of creating a work environment that strengthens job satisfaction, ensures fair evaluation, promotes career development and secures employee loyalty at Nkangala TVET College. Future research should employ longitudinal studies to track retention trends, qualitative interviews with departing staff to explore appraisal perceptions and comparative analyses across South African TVETs to test generalisability.

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Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

CRedit authorship contribution

Siboniso Mokoena: Writing – original draft. Risimati M. Khosa: Supervision. Abdul F. Maluleke: Supervision. All the authors reviewed the article, contributed to the discussion of results, approved the final version for submission and publication, and take responsibility for the integrity of its findings.

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Data availability

The data that support the findings of this study are available from the corresponding author, Siboniso Mokoena, upon reasonable request.

Disclaimer

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