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Administrative staffs' training needs and talent development at a Health Sciences University

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Orientation: Although administrative support staff are the glue that holds everything together in universities, they are often taken for granted when talent is identified and developed. Targeted training needs analysis and talent development interventions are often focused on elite academic staff, leaving a deficit in understanding how administrative support staff should be developed.

Research purpose: To determine or investigate training needs analysis and talent development practices to support Health Sciences University (HSU) administrative staff.

Motivation for the study: There is little empirical evidence and a lack of understanding of how to identify and address the specific training needs of administrative staff to increase universities' organisational performance.

Research approach/design and method: A deductive, quantitative approach, using a descriptive survey research design and census of the entire population (200) permanent administrative staff officers, secretaries or personal assistants in an HSU ($N = 163$), was employed. Statistical analysis included validity and reliability measures, correlations and exploratory factor analysis.

Main findings: The results revealed a strong, significant, positive link between the perception of training needs analysis process and talent management practices of administrative staff with regard to demographic variables of age, gender, job title, educational level, job level and tenure.

Practical/managerial implications: To reinforce the training needs analysis process and talent development for the entire staff or employees at the HSU.

Contribution/value-add: This study offers evidence of and advocates for new ways of working, including all staff's talents to maximise student support and organisational excellence.

Keywords: administrative staff; talent development; training needs analysis; talent management; universities.

Introduction

Globally, universities' success largely depends on their employees' excellence. Many institutions have systems in place to nurture talented academic employees, but little research has been done on identifying the required training and development needs of administrative staff and the specialised talent management practices necessary to encourage their growth (Bolman & Gallos, 2021; Mitchell, 2023). Universities' success, similar to all other organisations, depends on their talent to keep up with continuous environmental changes (Rožman et al., 2023). Globalisation has led to increased competition between higher education institutions. This has impacted the administration of these institutions, amplifying the important role of administrative staff in ensuring that students have a positive experience (Mitchell, 2023). Administrative staff are essential to implementing institutional policies and meeting the external and internal challenges universities face (Erasmus, 2020; Shin & Kehm, 2013). Administrative staff, together with their academic colleagues, play a key role in promoting the image and credibility of their organisations and delivering high-quality client service through their competence (Barkhuizen et al., 2015). This role is also linked with the university's vision of transforming health services through professional training and education of various fields to achieve organisational objectives. This vision should be achieved by capacitating administrative staff to be competent and committed to their roles (Strategic plan, 2021–2025). The administrative staff are important because they coordinate the

activities between different sections and departments in the university. Therefore, their training needs and individual talent must receive targeted attention to ensure the university's success (Mitchell, 2023). Research on the talent management of administrative staff remains limited (Amushila & Bussin, 2021). The impact of administrative staff on the success of universities is often overlooked and taken for granted. This is a mistake, as students interact closely with administrative staff members, and their perception of support from the university is often impacted by their interactions with administrative staff members (Cunninghame et al., 2020; Mitchell, 2023). This research contributes to the field as it contributes new knowledge on the specific training needs and talent management practices aimed at university administrative staff. An improved appreciation for and understanding of the important connecting role of the administrative staff will improve the functioning of universities and their ability to provide excellent service to their stakeholders, including students.

In line with Jung and Shin's (2015) explanation, in this article, the term 'administrative staff' refers to employees who occupy administrative positions at universities. These employees fulfil multifaceted, indispensable roles, including office work, research support, quality assurance, planning, facility and financial management, among others. According to Van Antwerpen and Ferreira (2010), the role of the administrative staff member is stimulating, challenging and rapidly changing, which makes this occupation appealing to new entrants. The role of administrative staff has become more important in the face of worldwide competition and expectations of institutional excellence (Hossen & Latif, 2016; Romlah et al., 2019).

The training needs analysis of administrative staff, including secretaries and administrative officers, is increasing in importance for the attainment of the organisations' strategic goals and objectives (Lagat & Makau, 2018). Besides, administrative staff directly affect people's achievements, by providing continued support when needed (Blatchford et al., 2009). Therefore, administrators are important stakeholders in the university, they must be highly skilled and their talent effectively attains the organisation's strategic goals. Most strategic talent management interventions at universities do not recognise administrative staff as important university employees (Brandenburg, 2016; Hunter, 2018; Mitchell, 2023).

In addition, the importance of excellent service delivery by administrative staff is often ignored as higher education institutions mainly focus on teaching and research while overlooking the crucial role of administrative activities that support and facilitate these tasks (Gallardo-Gallardo et al., 2020; Mahomed, 2004). Thomas (2005) and Aparna and Sahney (2024) state that administrative staff at higher education institutions experience pressure in terms of overwork, undermining of talent, verbal abuse and a lack of access to necessary information. From a management perspective, attention should be paid to identifying the training needs of administrators and offering opportunities for determining their individual needs.

This study is mainly informed by applying the OTP (organisation-, task- and person-) training needs analysis model or theory and the Human Capital Theory to make sense of the talent management and development practices that could support administrative staff in their career development at the Health Science University (HSU).

Research purpose and objectives

This article aims to investigate the link between the perception of administrative staff on the training needs analysis process and talent management practices at HSU. The objectives of this article are as follows:

- Measure perceptions of administrative staff in terms of the training needs analysis process and the talent management practices at HSU.
- Investigate the link or relationship between the perception of training needs analysis process and talent management practices within HSU environment.
- Evaluate the differences in the Training Need Assessment (TNA) process and Talent Management (TM) practices with regard to demographic variables of age, gender, job title, educational level, job level and tenure.

Effective talent management requires all stakeholders to move beyond process to practices that encourage individuals to work towards achieving highly desired organisational outcomes. We ask the following research questions:

- **RQ1:** What are the administrative staff's perceptions of the training needs analysis process and the talent management practices?
- **RQ2:** What is the relationship between administrative staff's perception of training needs analysis and talent management?
- **RQ3:** How do the university administrative staff's perceptions of the training need analysis process and effective talent management practices differ according to their demographical profile (age, gender, job title, educational level, job level and tenure)?

Literature review
Training needs assessment

The training and development of administrative staff differ in different countries; for example, administrative staff in Korea, Japan, Taiwan, Germany and France have government employee status, and their employment, promotion, salary, pension and retirement age are the same as other civil servants (Jung & Shin, 2015). In Germany, on the other hand, the rise in the number of administrative staff in the 1990s to early 2000s was due to the development of higher-grade positions and recently created higher-education occupations (Krucken, 2011; Krücken et al., 2013).

Theoretically, this study draws heavily on the OTP model to explain the role of training needs assessment. The main focus of the theory is the effective integration of the organisational goals, task specifics and personal training needs at the

employee, departmental or organisational level to help the organisation perform effectively (Jamil & Som, 2007; Khan & Al Zubaidy, 2016; McGehee & Thayer, 1961). Akther et al. (2018) also confirm that effective TNA serves the needs of individual growth and development, while the organisation benefits from improved learning and more successful transfer after training. Health Science University should increase their TNA by identifying the administrative staff's needs at the individual, group and organisational levels. Training needs analysis helps to prioritise training needs and assist in equipping employees with the specific skills required to achieve the strategic intent of the organisation (Vinesh, 2014). Therefore, the university needs to manage the administrative employees' talent timeously, to prepare for changing future demands (Kurgat, 2016). Vaiman et al. (2015) view talent as the specified and in-demand knowledge, skills and abilities among individuals in critical job roles and talent management as a set of organisational procedures intended to attract, develop, mobilise and retain key people.

The authors claim that individuals are born with a unique gift. For individuals to be recognised as a natural performer in the workplace, they must be discovered and developed, enabling them to make a significant and distinctive contribution to accomplishing organisational objectives. Talent, on the other hand, is a set of talent-intelligence skills that can be used to solve problems (Visser et al., 2018).

Talent management

Human capital theory (HCT) is a foundational theoretical framework for explaining how organisational talent (such as the HSU administrative staff) can be valued and developed. A basic tenet of the theory is that employees' contributions have an economic value, and as these employees develop their abilities and potential through life-long training and development interventions, their value increases (Becker, 1993; Mitchell, 2023). These interventions are often an integral part of organisations' talent development programmes.

Talent management is ambiguous and multidimensional (Kaliannan et al., 2023), and as a phenomenon, it lacks an accepted theoretical framework (Sirkova et al., 2015) and widely accepted definition (Kaliannen et al., 2023; Lewis & Heckman, 2006). Ghosh (2021) defined talent management as the systematic, organised and planned procedure of getting the right talent on board and developing them to achieve organisational goals. Talent management could be viewed as a strategic plan to recruit, select, develop and encourage them to remain (Bauer & Greven, 2015).

According to Alsakarneh and Hong (2015), talent management and human resource management are linked, but not identical. Talent management refers to the development of integrated programmes that are designed to improve efficiency by identifying, developing, retaining and using individuals with the skills, knowledge and ability to satisfy existing and future organisational needs (Thomas & Letchmiah, 2017). Thus, effective talent management practices are essential to

managing, developing and retaining talented new employees. Nilsson and Ellstrom (2012) add that talent management is linked with acquiring new knowledge and doing things more quickly and efficiently.

Less academic consideration has been paid to talent management issues in public sector organisations, including how they describe talent and how successful they are in their search for talent (Gallardo-Gallardo & Thunnissen, 2016; Kravariti & Johnston, 2020). In total, according to Van Zyl et al. (2017), it seems to be a lack of connection between talent management practices and the wider human resources system.

The role of administrative and support staff

Although talent management is valued within many organisations, it is less so for universities' administrative and support staff (Rudhumbu, 2014). Without adequate training needs analysis and strategic talent management practices for administrative staff, service quality may be less than optimal, and universities may suffer. Although administrative staff may have been marginalised in the past, they must continue to be oriented and learn new roles and actively participate in the process to support the faculty, the institution and its stakeholders (Antiado et al., 2020).

The significance of the administrative staff's role in the effective operation of higher education institutions is well recognised (Burke et al., 2013; Krücken et al., 2013). Universities are also good examples of organisations that require a healthy, positive organisational climate to support the performance of their employees so they can carry out their crucial function of coordination and providing support within their organisational community (Ahmed et al., 2018). In order to perform their job effectively, administrative staff should have a skill set that is superior to that of technical aptitudes (Venter et al. 2019). Although productivity and quality of service delivery are priorities for universities, only a few, especially in the emerging world, provide a positive and supportive operational environment for administrative staff to grow, develop and attain their objectives (Wilson, 2016; Zareen et al., 2013).

Many universities do not recognise the importance of the training needs analysis phase in practice or strategic initiatives of administrative staff as a critical component (Erasmus, 2020; Jamil & Som, 2007). The training needs analysis and talent management methodologies used by administrative staff at HSU are not well defined. There is no consensus on how these processes should be structured for the university or how they should be used to ensure the achievement of the organisational objectives (Matlakala et al., 2021). As indicated, the shifts in the higher education landscape highlight the need for improved training needs analysis and strategic talent management strategies for the HSU's administrative staff. To achieve organisational objectives and improve understanding, an investigation into the restricted training needs analysis and talent development practices of administrative staff is vital (Matlakala et al., 2021).

This study sought to find the relationship between the administrative staff's perception of the training needs analysis process and university talent management practices and make recommendations for improvement.

Administrative staff is a vital component of the university workforce in the majority of strategic plans (Brandenburg, 2016; Hunter, 2018). However, Hurlimann et al. (2013) refer to the complete neglect of the value of administrative work in higher education settings. Barkhuizen et al. (2014) found that talent management techniques aimed at administrative staff are ineffective, despite the fact that staff saw the talent review process, retention techniques, talent development and talent management as important value-added activities. To enable administrative staff to grow and develop in their roles, universities should invest in effective talent management strategies (Poalses & Bezuidenhout, 2018).

Every employer must ensure that the employees' skills are continuously improved to achieve the organisational goals. To achieve organisational success, it is essential to accurately identify the training needs of employees (Clinton et al., 2016). Ryttberg and Geschwind (2017) indicate that administrative staff, previously perceived as a peripheral function, is now being recognised as vital for achieving teaching and research excellence by supporting business liaisons and research grant administration. According to Poalses and Bezuidenhout (2018), the university should invest in planned talent management initiatives for administrative employees to support them to excel and prosper in their roles.

Organisations' plans depend on an efficient and effective human resource strategy. Therefore, Human Resource Management (HRM) should harmonise the organisation's strategy with its talented employees who can meet and achieve the organisation's current and future goals (Alsakarneh & Hong, 2015).

The primary aim of learning activities is to help employees master the knowledge, skills, abilities and attitudes required by the organisation (Mahapatro, 2010). Therefore, talent management is conducted by, firstly, determining the organisation's needs for talent; secondly, by finding a source of talent; thirdly, by developing employees and their collective talents and finally, by confirming that talented staff are integrated into the human resource management process and aligned to the strategic goals of the organisation (Poisat et al., 2018; Yasin, 2014).

Training and development opportunities are key to polishing and directing talents to achieve organisational objectives (Alruwaili, 2018). Despite this, the organisation's increasing awareness of the existence and shortage of talent may trigger recognition of the importance of talent to the growth of the organisation. However, organisations also compete to get talented employees by searching outside the organisation or training their current employees (Yasin, 2014).

Silzer and Dowell (2010) state that talent management aligns the HR programmes and functions as a core business management process through four steps: the identification of strategic talent needs, human resource development planning based on the competencies required, development capacity, and retaining (Silzer & Dowell, 2010).

To achieve the organisation's plan through talent management, employee development programmes should be designed at all levels of the organisation that meet the needs of the individual and organisation (Yasin, 2014). Employee development plans of administrative staff should be designed at all levels of the university and mapped with the choices of training suitable for their competencies. The talented employees (administrative staff) should have the training and development to create a feeling of loyalty to Health Sciences University and feel that the organisation's leaders give them adequate care.

By linking all views of talent management, a talent management process that includes identifying the high potential and high-performer employees, developing a talent pool, providing development practices and developing retention practices is proposed (Tetik, 2016). The success of talent management on administrative staff depended on the availability of training and development. However, talent management begins with the business strategy and carries on developing and maintaining a 'nursery' of talent, which would require employees' professional qualities, loyalty and active involvement (Robertson, 2015; Thomas & Letcmiah, 2017). There are many strategies for managing talented people, such as encouraging talented people, to share ideas, knowledge and skills or to provide coaching and training programmes for talented people, to ensure everyone in the organisation feels valued at work (Salacuse, 2006; Robertson, 2015).

The talent development process starts by identifying the individuals' potential and performance (Ross, 2013). Once talent development forms part of the organisation's plan, key people are developed for the key positions that ensure gain competitive advantage (Collings & Mellahi, 2009). Therefore, the strategic development of talent is nurtured by planned and unplanned development facilities in an organisational setting, like learning activities (Tetik, 2016). The need for talent with competencies (general and specific) is undeniable, as the most important skills, knowledge and behaviours are necessary to execute the organisation's strategy (Batisda et al., 2021). There was a need for talent management of the administrative staff to improve their competencies. Therefore, training should be planned properly to achieve the organisational competitive advantage.

One of the important sub-dimensions of talent management is learning and performance improvement interventions, aimed at developing the talent of diverse employees. Talent development interventions provide employees with opportunities to grow and advance and organisations with skilled and competent employees (Debebe, 2023). According to Semaihi et al. (2023), the public sector should also acknowledge that only through effective talent development

will they develop and engage the next generation. This development process must also be integrated with the individual performance plan (IPP) and aligned to prepare training needs analysis. The Human Resource Development (HRD) process needs to be evaluated quarterly (every 3 months) to be related to the development of each individual. With the continued development of talent, the organisation has the availability of talent to carry out the work properly (Berliandaldo & Hidayat, 2017). Individual performance plan of administrative staff should be aligned with their training need, and the HRD process should be evaluated every 3 months.

Both training needs analysis and talent management were incorporated into the organisation's employment plan. Despite this, both training needs analysis and talent management were focused on achieving the goals of the organisation, identifying the training that needs to be provided to the individual talented employees based on their jobs (Alruwaili, 2018; Altarawneh & Aseery, 2016; Nwoke et al., 2016). A planned training needs analysis and talent management linked with the organisation's goals will address administrative staff's identified talent gaps by providing training as the only solution.

Research methodology
Research approach
The research followed a deductive, post-positivistic philosophy (Babbie, 2016; Creswell, 2014) to present the results of a quantitative survey research design and allow generalised results from a census of the entire population and to investigate the link between the administrative support staff's perception of the training needs analysis process and talent management practices.

Respondents
The respondents were all permanently appointed administrative support officers and secretaries or personal assistants. As the total population (N = 200) was judged too small for further sampling, a census of all possible respondents was used. A total of 163 completed surveys were returned and considered for further analysis, eliciting a response rate of 81.5% (121 administrative support officers and 42 secretaries or personal assistants).

Measuring instruments
A cross-sectional, online survey invited administrative staff to share their perceptions of the training needs analysis process and the talent management practices at the university on a Likert scale of 1–5 (1 being strongly disagreed, 5 being strongly agreed). The instrument consisted of three sections: the first section collected demographic information. The second measured staff perceptions of the training need analysis process (24 items), measuring five sub-dimensions, namely feedback, task significance and organisational, task and individual analyses, and the third focused on talent

management practices (25 items). Survey items were informed by Barkhuizen et al. (2014) and Barkhuizen et al. (2015). An example of one item is training needs analysis at the HSU is linked to the university's strategic objectives.

The third section drew on Barkhuizen et al. (2015) and measured four talent management dimensions: talent development, selection, utilisation and retention. One example is: HSU identifies talent by using the university's present capabilities and potential to meet current and future needs. In addition, the questionnaire was developed by the researcher in accordance with Barkhuizen et al. (2014) questionnaire on their research concerning TM on administrative staff (Barkhuizen et al., 2014, 2015).

Research procedure and ethical considerations
The research project obtained permission and ethical approval for conducting research with human subjects from the university's ethical committee, and all guidelines were strictly adhered to. Moreover, the study obtained informed consent from the participants, and the consent form explained the subject's nature and objectives. Participation of administrative staff was voluntary, and their right to privacy was respected; therefore, there was no fee, and confidentiality was maintained at all times.

Ethical considerations
Ethical clearance was obtained from the University of South Africa's HRM Ethics Review Committee and Sefako Makgatho University Research Ethics Committee (2019 HRM 013).

Results
Statistical analysis was conducted using the Statistical Package for Social Sciences version 25.0. The respondents' age ranged between 20 years and 65 years. The highest percentage (46.6%) was between 31 years and 40 years, with females comprising 73.6%, which is consistent with the typical gender distribution in administrative support roles. The highest percentage (31.3%) had a Diploma, and the lowest (1.8%) had a PhD degree. Most respondents were on a Grade 12 job level (with level 16 being the lowest at the university). Most respondents worked in the School of Medicine (57.7%), and most (46.6%) worked at the university for less than 5 years, indicating a high turnover.

As this sample was a census of an entire small population (200) rather than a small random sample of a large population (response rate 81.5%), we used the Kaiser-Meyer-Olkin (KMO) test and Bartlett test (Chan & Idris, 2017; Field, 2018) to measure for sampling adequacy. The KMO score (0.886) indicates that the realised sample (Table 1) was judged large enough for further analysis, including factor analysis.

The instrument's factor structure was scrutinised by performing an exploratory factor analysis (EFA) using principal component analysis with varimax (Field, 2018). The underlying structures

of the TNAs and the TM surveys were explored to identify the latent variables that form each sub-factor. Scores with commonalities below 0.30 were excluded (Field, 2018). Factors were allowed to correlate, and the extraction was based on the commonalities ranging from 0 to 1. Knafl and Grey (2007), Field (2018) and Velicer et al. (2000) developed criteria for retaining a valid factor, for example, showing a loading of at least 0.7 (Velicer et al., 2000). Subsequently, Cronbach's alphas were calculated to inspect reliability (Field, 2018).

For the TNA construct, items 15 and 23 were judged too low (commonalities < 0.30) and were excluded. The EFA showed one underlying factor for each sub-scale, with acceptable variance and item loadings, as shown in Table 1-A1 (Appendix 1). For the Talent Management questionnaire, EFA revealed four underlying factors, with acceptable variance and factor loadings, presented in Table 2. Feedback emerged as the strongest factor (Factor 1), with eight latent items loading on it; organisational analysis (Factor 2) had a strong factor loading with six items; task significance (Factor 3) and task analysis (Factor 4) met all the requirements to be retained. Person and individual analysis (Factor 5) was discarded, as only one item was loaded on the factor (Field, 2018; Knafl & Grey, 2007; Velicer et al., 2000). It also did not extract sufficient variance (Velicer et al., 2000).

Upon exploration of the TM factor structure, a principal axis factor analysis on varimax was again performed to assess the fundamental structure of the 25 questions on talent management in Table 1-A2 (Appendix 2). Each item was allowed to load on a specific latent factor. Factors were allowed to correlate, and the extraction was based on the commonalities ranging from 0 to 1. Table 3 presents the variance explained and the new factor structure on talent management.

Factor 1 (Talent development), Factor 2 (Talent selection) and Factor 3 (Talent utilisation) showed acceptable factor loadings and eigenvalues. In addition, the overall reliability of the two questionnaires was confirmed, with all the Cronbach's alpha scores being above 0.8 (Pallant, 2011) in Table 1-A3

(Appendix 3). Authors were therefore confident to accept the instrument as a valid and reliable measure.

To address *RQ1*, descriptive statistics (means, standard deviations, skewness and kurtosis) were calculated. Then, Pearson correlation tests were used to examine relationships between the training needs analysis process and talent management practices (Field, 2018). Table 4 and Table 5 present the descriptive statistics of training needs analysis and talent management.

From Table 4, it is clear that the training needs analysis total scores ranged between 3.29 and 4.12. Training need assessment's mean score is 3.78 and standard deviation (SD) on 1.294. Based on a 3.62 average rating for organisational analysis, the results indicate that HSU provides training and development opportunities for administrative staff and encourages staff participation in training activities. Given the high mean score of 4.12 for feedback, the ratings suggest that administrative staff recognise that the HSU TNA reflects the university's vision and mission, as well as its strategic goals. Also, this indicates that training requirements in office environments are extremely important, and that administrative staff need to receive feedback to get the job done. Moreover, the above mean score of 4.12 for task significance suggests that administrative staff note that the HSU TNA procedure effectively identifies the actual training needs of their employees. In addition, the administrative staff perform their duties to impose heavy fines on their employees and affect them in a significant way (Oldham & Fried, 2016). Therefore, task importance is a crucial component of the TNA process in the university.

Lastly, the mediocre ratings, based on a mean score of 3.29 for task analysis, suggest that administrative staff acknowledge that the HSU TNA system is not being effectively implemented. Furthermore, the administrative staff believes that office work is important and that it requires a task order, task complexity or one or two people to complete a given task.

Table 5 shows the scores for talent management varied between 3.27 and 4.52. The TM average mean score is 3.70, and the SD average is 1.404. Based on a high mean score of 4.52 for the talent utilisation sub-dimension, the above results indicate that the administrative staff are fully committed to their jobs and to carry out their duties in order to support the HSU's strategy. Therefore, the university's administrative staff is able to perform their office duties with utmost

TABLE 1: Kaiser-Meyer-Olkin and Bartlett's test.

KMO and Bartlett's test	Variable	Result
Kaiser-Meyer-Olkin measure of sampling adequacy	-	0.886
Bartlett's test of sphericity	Approx. Chi-square	2414.337
	df	276
	Sig.	0.000

df, degree of freedom; Sig., significance; KMO, Kaiser-Meyer-Olkin.

TABLE 2: Factor structure and total variance explained for training need analysis model.

Component	Number of items	Initial eigenvalues			Extraction sum of squared			The rotated sum of squared		
		Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1 Feedback	8	8.910	37.123	37.123	8.910	37.123	37.123	4.583	19.096	19.096
2 Organisational analysis	6	3.060	12.750	49.874	3.060	12.750	49.874	4.198	17.492	36.589
3 Task significance	5	1.713	7.139	57.013	1.713	7.139	57.013	3.519	14.664	51.252
4 Task analysis	4	1.582	6.591	63.604	1.582	6.591	63.604	2.759	11.494	62.747
5 Person and individual analysis	1	1.210	5.041	68.645	1.210	5.041	68.645	1.416	5.898	68.645

TABLE 3: Factor structure and total variance explained on talent management practices.

Components	Initial eigenvalues			Extracted squared			Rotated squared		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
Talent development	12.255	49.019	49.019	12.255	49.019	49.019	7.719	30.878	30.878
Talent selection	2.273	9.092	58.112	2.273	9.092	58.112	4.812	19.250	50.128
Talent utilisation	1.704	6.815	64.926	1.704	1.704	64.926	2.923	11.692	61.819
Talent retention	1.145	4.580	69.507	1.145	1.145	69.507	1.922	7.687	69.507

TABLE 4: Descriptive statistics for training needs analysis.

Scale dimensions	Mean	Standard deviation	Standard error	Skewness	Kurtosis
TNA_4	3.78	1.294	0.102	-1.059	0.577
Feedback	4.12	1.299	0.102	-1.526	2.396
Organisational analysis	3.62	1.382	0.108	-0.804	-1.288
Task significance	4.12	1.195	0.094	-1.526	2.396
Task analysis	3.29	1.298	0.102	-0.378	-1.197

TNA, training need assessment.

TABLE 5: Descriptive statistics for talent management.

Scale dimensions	Mean	Standard deviation	Standard error	Skewness	Kurtosis
Talent management (TM_3)	3.70	1.404	0.110	-1.198	1.606
Talent development	3.31	1.412	0.111	-0.606	-1.193
Talent selection	3.27	1.412	0.111	-0.467	-1.367
Talent utilisation	4.52	1.388	0.109	-2.522	7.379

confidence. The mean score for talent development is 3.31 (neutral), but it is marginally higher for the development of talent employees than the average score for talent development. Administrative staff agree that the HSU recognises talent development by using the existing TNA approach, according to the ratings. As a result, administrative staff have a marginally positive attitude towards their talent development within their office jobs at the university.

In addition, the mean score of 3.27 (neutral) for talent selection is only marginally positive for talent selection. Administrative staff believe that their line managers are able to identify the best candidates, according to the surveys. In addition, administrative staff is a little positive about the university's talent pick. Talent selection plays a vital role in talent acquisition and utilisation, and it is closely connected to talent acquisition and utilisation. However, HSU must improve their talent selection of administrative staff in all aspects of TM practice, as it has the lowest mean rating of 3.27. These mean scores are an accurate representation of the results, with the highest average score coming from talent use. The overall score indicates that administrative staff were committed to meeting their identified training needs in order to get their job done. The descriptive statistics results of TM practice are encouraging, since the overall mean score for TM 4 is 3.70.

The mean scores are a precise representation of the results, with the maximum mediocre score being achieved from the angles of feedback and task significance. The results show that administrative staff were given feedback regarding their identified training needs. It is also important for them to get the job done, considering the task's importance. The TNA-4

mean score is good when considering the findings of the descriptive statistics.

Addressing *RQ2*, Table 6 shows a significant positive correlation ($r = 0.709$; large effect; $p \leq 0.05$) between the staff perception of the overall training needs analysis process and the talent management practices.

The results of the overall training needs analysis correlated strongly with the overall talent management results (0.709***). Significant, positive correlations were also found among the sub-dimensions of training needs analysis and talent management.

Next, *RQ3* required investigating how the administrative and support staff's perceptions of the TNA process and effective TM practices differ according to their profile. Mann-Whitney tests were applied to investigate the mean differences of age (early career and late career), gender (male and female), job title (administrative officer and secretary), educational level (undergraduate and postgraduate), job level (lower level and high level) and tenure (less experience and more experience), in terms of the training needs analysis process and talent management practices in Table 7 (Field, 2018).

The results presented the overall training needs analysis and talent management mean scores, using a 0.05 cut-off point. For example, the *p*-value of 0.068 is greater than the critical value of 0.05. Therefore, the perceptions of different age groups, gender (0.606), job title (0.149), educational level (0.583), job level (0.742) and tenure (0.658) on the mean rank differences show there are no significant differences in their perceptions of the training needs analysis and talent management practices reported (Table 7). It is worth mentioning that although not significant, the early career group showed a higher need for training needs analysis (87.77) than the late-career group (74.14). This indicates that the early-career group had a slightly more pronounced awareness and need for their training needs to be acknowledged than the late-career group. The *p*-value (0.068) is close to the cut-off point of 0.05.

Regarding talent management, the *p*-values obtained for age (0.349), gender (0.121), job title (0.505), educational level (0.358), job level (0.559) and tenure (0.658) were not statistically significant differences; none of the values was close to the cut-off point, and we are confident in concluding that no differences were observed for any of the demographical variables. The correlation analysis was done to determine whether there are any significant differences between the training needs analysis process and talent management

TABLE 6: Correlations between training needs analysis-4 and talent management (N = 163).

Variables	Training needs analysis (total score)	Feedback	Organisation analysis	Task significance	Task analysis	Talent management (total score)	Talent development	Talent selection	Talent utilisation
Training needs analysis-4 (total score)	**1.000**	0.846***	0.842***	0.792***	0.368**	**0.709*****	0.674***	0.554***	0.534***
Feedback	-	**1.000**	0.678***	0.572***	0.028	0.645***	0.618***	0.490**	0.468**
Organisational analysis	-	-	**1.000**	0.572***	0.068	0.732***	0.695***	0.640***	0.445**
Task significance	-	-	-	**1.000**	0.220*	0.532***	0.545***	0.343**	0.415**
Task analysis	-	-	-	-	**1.000**	0.046	-0.007	0.025	0.182*
Talent management (total score)	-	-	-	-	-	**1.000**	0.940***	0.893***	0.582***
Talent development	-	-	-	-	-	-	**1.000**	0.744***	0.377***
Talent selection	-	-	-	-	-	-	-	**1.000**	0.515***
Talent utilisation	-	-	-	-	-	-	-	-	**1.000**

Note: Bold values represent significant positive correlations between variables and total TM.

*, $p \leq 0.05$, + $r \geq 0.29$ (small effect); ++ $r \geq 0.30$ $r \leq 0.49$ (medium effect); +++ $r \geq 0.50$ (large effect) (Field, 2018).

**, $p \leq 0.01$.

***, $p \leq 0.001$.

TABLE 7: Demographic differences.

Ranks	Ranks		p
	n	Mean rank	
Training needs analysis			
Age	-	-	**0.068**
Early age	94	87.77	-
Late age	69	74.14	-
Gender	-	-	0.606
Female	120	83.14	-
Male	43	73.81	-
Job title	-	-	0.149
Administrative officer	121	78.86	-
Secretary	42	91.05	-
Educational level	-	-	0.583
Undergraduate	91	78.10	-
Postgraduate	61	74.11	-
Job level	-	-	0.259
Lower level	70	55.64	-
High level	46	62.85	-
Tenure	-	-	0.742
Less experience	108	80.64	-
More experience	54	83.21	-
Talent management			
Age	-	-	0.349
Early age	94	84.96	-
Late age	69	77.96	-
Gender	-	-	0.121
Female	120	80.52	-
Male	43	86.13	-
Job title	-	-	0.505
Administrative officer	121	78.86	-
Secretary	42	91.05	-
Educational level	-	-	0.358
Undergraduate	91	79.19	-
Postgraduate	61	72.49	-
Job level	-	-	0.559
Lower level	70	57.02	-
High level	46	60.75	-
Tenure	-	-	0.658
Less experience	108	82.65	-
More experience	54	79.19	-

Note: Boldface value indicates the perceptions of different age groups on the mean ranks differences; it shows that there is no significant difference with regards to their perceptions of the TNA process evaluation questions.

practices. Also, the Mann-Whitney test was done to determine the mean differences concerning the demographic differences.

Discussion

The purpose of this study was to investigate the training needs assessment and talent management practices used to develop administrative and support staff at the HSU in South Africa. The results show that administrative support staff are satisfied with their training needs analysis processes. The administrative staff reported a positive experience of talent management practices at the HSU, with the mean values for the talent management practices ranging between 3.27 and 4.52. These scores are significantly higher than (Barkhuizen et al., 2014, 2015) found for administrative support staff at the North-West University in South Africa (1.74–2.93). The talent management practices that appeared most difficult included a lack of retention strategies (1.74). Academic staff's talent management scores (Saurombe & Barkhuizen, 2022) ranged between 2.40 and 3.15. The mean scores on talent acquisition and development (3.06) and talent retention (2.40). These results are also slightly lower than those at the HSU.

However, a previous study conducted by Barkhuizen et al. (2014) on talent management, work employment and service excellence orientation of administrative staff in a higher education institution at North-West University testing talent management (values ranged between 0.822 and 0.948) showed the respondents experienced average levels of work engagement (values ranged between 0.895 and 0.946), but high levels of service orientation (values ranged between 0.852 and 0.929).

The study also uncovered a strong relationship between training needs assessment and talent management practices in this group of administrative staff. In addition, our results revealed strong positive relationships between the perception of the TNA process and TM practices. This is an important finding, as it draws attention to effective training needs analysis as a foundation for effective talent management practices.

The results drew attention to the fact that the administrative staff is a diverse group of employees with diverse needs for talent management and development interventions. Linking this finding to the OTP theory, it emphasises the importance of effective training needs assessment to identify and address person-specific needs, rather than a generic 'one-size fits all' or rather 'no-size fits all' approach. It showed that the younger, early-career group presented with a higher, more pronounced awareness and need for their training to be addressed than the late-career group. It aligns with the idea that early career support staff are ambitious and working towards a sustainable career path. They are also aware of the global challenges, digitisation and the need to continue their personal and professional development to improve their career prospects.

Management implications

Our results have important implications for the management of administrative staff at the Health Sciences University. While we noted the staff is aware of and values current efforts, management needs to continue to invest in and extend training needs assessment and talent management practices, to support the attraction, development and retention of the necessary talent. Applying HCT, managers need to invest in identifying the most relevant learning needs of administrative staff and then provide targeted, focussed life-long learning interventions to ensure the value of these staff members is affirmed. Talent development interventions should enable them to continually develop their talents to the benefit of the students and the whole university community.

Further, our results show how important effective training needs analysis is as a foundation for selecting effective talent management practices. It addresses the age-old problem of 'training for the sake of training', instead of developing people appropriately with the knowledge and skills they require at a specific time. The implication is that organisations, such as universities, need to strategically identify the development needs of administrative support staff in good time and correctly to ensure that effective talent development interventions are put in place timeously. Managers should implement targeted performance gap assessment, and root cause assessment to determine whether training is indeed the answer to the problem and to avoid generic 'no-size fits all' interventions that do not address the root causes (Akther et al., 2018). Therefore, we strongly recommend including effective training needs analysis practices to support organisations' talent development programmes.

The results revealed differences between demographic groups and it would be helpful if a range of interventions could be made available to allow for different needs and ambitions. Management should make a concerted effort to provide younger talented administrative and support staff with dedicated opportunities to address their needs for digital upskilling and personal and professional development opportunities.

Limitations and recommendations

We acknowledge the study's limitations, including the cross-sectional design, and recommend longitudinal studies be undertaken in the future. Also, enlarging the number of administrative staff across the higher education sector would be beneficial. Administrative support staff in higher education institutions play an important role in creating high-quality customer service for students and other stakeholders. Therefore, the researcher recommends that the university focus on the talent management of all the administrative staff, including older employees.

The results also incentivise higher education management to develop and implement suitable talent management practices for key administrative support staff and enhance their training needs analysis efforts. We recommend that the university should create an environment where gifted administrative employees can flourish and grow alongside their academic counterparts.

Conclusion

The research objectives were achieved and the results confirmed that there is a significant relationship between the TNA process and TM practice in the HSU. This article emphasises the importance of the talent development of academic support staff. It is also the first to show the strong association between the training needs analysis process and talent management practices. This is important to achieve the strategic goals and aims of the university. There is a considerable talent development and talent selection contribution to the administrative support staff's training needs level; hence, training needs analysis and talent management should be linked to the identified training needs plans of the university. Further research is required on the experience of the academic and administrative support staff in other contexts and with bigger samples.

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Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

Funding information

Data availability

The data that support the findings of this study are available from the corresponding author, H.N.M., upon reasonable request.

Disclaimer

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Appendix 1

TABLE 1-A1: Rotated factor matrix of training needs analysis.

Rotated factor matrix	Factor				
	1	2	3	4	5
	Feedback	Organisational analysis	Task significance	Task analysis	Person/individual analysis
Q1b. Training needs analysis at the Health Sciences University is linked to strategic objectives of the university.	0.877	-	-	-	-
Q2b. Training Needs Analysis at the Health Sciences University involves the vision and mission of the university.	0.769	-	-	-	-
Q3b. Training Needs Analysis information is used to finalise a training plan for the university.	0.700	-	-	-	-
Q5b.Training Needs Analysis at Health Sciences University involves the funds.	0.666	-	-	-	-
Q9b Health Sciences University's Training Needs Analysis process supports decision about when training is the best option to improve individual performance.	0.640	0.483	-	-	-
Q8b. Training Needs Analysis is part of the Strategic Human Resource Development processes at Health Sciences University.	0.621	0.413	-	-	-
Q6b. The Training Needs Analysis at the HSU works with the performance management system.	0.618	0.380	-	-	-
Q4b. Training is effective if the training outcomes match with the university goals.	0.613	-	0.466	-	-
Q15b. Health Sciences University initiates training and development opportunities for me.	-	0.809	-	-	-
Q12b. Top management in the Health Sciences University encourages staff participation when conducting training needs.	-	0.776	-	-	-
Q10b. Training opportunities are available for employees to improve their skills with regard to new technology.	-	0.750	-	-	0.303
Q11b.Re-training opportunities are available for employees to improve their skills with regard to new technology.	-	0.713	-	-	0.308
Q14b. My department supports me by providing training and development related to my work.	-	0.674	-	-	0.374
Q7b.The Strategic Human Resource Development plan is followed at Health Science University.	0.492	0.552	-	-	-
Q21b. The Training Needs Analysis process effectively identifies what content should be taught.	-	-	0.798	-	-
Q20b. The Training Needs Analysis process effectively identifies who should be trained.	-	-	0.788	-	-
Q22b. The Training Needs Analysis allows the organisation to identify specific training needs that employee may have with regard to a particular skill.	-	-	0.731	-	-
Q19b. The Training Needs Analysis identifies the type of training that is needed to fill the gap in my job needs.	-	-	0.712	-	-
Q23b. Training Needs Analysis is the right step to design an applicable, cost-effective training programme.	-	-	0.554	-	0.475
Q17b. Training Needs Analysis is not effectively implemented at Health Sciences University.	-	-	-	0.847	-
Q16b. Training Needs Analysis is not conducted continuously.	-	-	-	0.840	-
Q18b. Training needs are not reviewed annually.	-	-	-	0.804	-
Q13b. There is no commitment by top management to carry out Training Needs Analysis.	-	-	-	0.592	-
Q24b. Training Needs Analysis at the Health Sciences University involves only certain group of employees.	-	-	-	0.344	0.720

Extraction method: Principal Axis Factoring, Rotation Method: Varimax with Kaiser normalisation.

Appendix 2

TABLE 1-A2: Rotated factor matrix of the talent management.

Rotated factor matrix	Factor			
	1	**2**	**3**	**4**
	Talent development	Talent selection	Talent utilisation	Talent retention
Q1c. Health Sciences University identifies talent by using university's present capabilities and potential to meet current and future needs.	0.819	-	-	-
Q4c. Talent planning at Health Sciences University integrates the personal development goals of employees with the university's strategy.	0.802	0.364	-	-
Q5c. The Health Sciences University's recruitment strategy is aligned to the talent management strategy.	0.792	-	-	-
Q3c. Health Sciences University uses work performance to identify employees who are talented.	0.780	0.361	-	-
Q2c. The Health Sciences University measures current performance of employees as part of the Talent Management system.	0.763	0.381	-	-
Q6c. Recruitment plan at the Health Sciences University is the key business goal to determine the skills and talent required to achieve strategic objectives.	0.753	-	-	-
Q8c. The remuneration strategy at Health Sciences University is aligned to the university strategy.	0.744	-	-	-
Q13c. Performance management system is aligned to the Health Sciences University's strategy.	0.740	0.326	-	-
Q9c. The rewards and recognition system at Health Sciences University is aligned to the university strategy.	0.735	-	-	-
Q12c. Performance management system is available at the Health Sciences University.	0.727	0.382	-	-
Q7c. Talent management is regarded as a strategy to identify, develop and retain talent in the organisation.	0.624	-	-	-
Q25c. Talent management processes at the Health Sciences University support successful talent management.	0.608	0.596	-	-
Q16c. My line manager organises the required training for me to be able to carry out my job.	-	0.800	-	-
Q14c. My line manager is able to completely identify talent.	-	0.741	-	-
Q15c. My line manager provides the resources I need to carry out my job.	0.314	0.728	-	-
Q23c. The culture of the Health Sciences University makes me want to continue working for the university.	0.401	0.655	0.317	-
Q24c. The Health Sciences University culture assists employees to feel linked to their institution and job.	0.501	0.634	-	-
Q17c. I experience a sense of belonging at the Health Sciences University.	0.356	0.616	0.314	-
Q22c. I am satisfied with the opportunities to show off my talent.	-	0.604	0.440	-
Q19c. I am committed to do my job.	-	-	0.797	-
Q18c. I support Health Sciences University's vision for the university.	-	-	0.740	-
Q20c. I am satisfied that I have adequate skills to carry out my job.	-	-	0.731	-
Q21c. I am satisfied with my talent as anticipated by the human resource policies.	-	0.329	0.649	-
Q11c. Adequate reward and recognition is very important to retain talent at the Health Sciences University.	-	-	-	0.880
Q10c. Adequate rewards and recognition system is very important to attract talent at the Health Sciences University.	-	-	-	0.879

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser normalisation.

Appendix 3

TABLE 1-A3: Cronbach's alpha scores for training needs analysis and talent management.

Scale dimensions	Mean	SD	Skewness	Kurtosis	Cronbach's alpha
Training Needs Analysis–4 sub-scales					
Feedback	4.12	1.299	-1.526	2.396	0.895
Organisational analysis	3.62	1.382	-0.804	-1.288	0.893
Task significance	4.12	1.195	-1.526	2.396	0.860
Task analysis	3.29	1.298	-0.378	-1.197	0.799
Talent management–3 sub-scales					
Talent development	3.31	1.412	-0.606	-1.193	0.946
Talent selection	3.27	1.412	-0.467	-1.367	0.910
Talent utilisation	4.52	1.388	-2.522	7.379	0.767