


Organisational determinants of job satisfaction in the South African renewable energy sector



Authors:

Bridget de Villiers¹ 
Alice Mienie² 

Affiliations:

¹Department of Human Resource Management, Faculty of Business and Economic Sciences, Nelson Mandela University, Port Elizabeth, South Africa

²Business School, Faculty of Business and Economic Sciences, Nelson Mandela University, Port Elizabeth, South Africa

Corresponding author:

Bridget de Villiers,
bridget.devilliers@mandela.ac.za

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Orientation: Employee job satisfaction is linked to positive organisational outcomes, including profitability, productivity and reduced employee turnover. The factors that act as determinants of job satisfaction may differ from one sector and organisation to another.

Research purpose: The purpose of this study was to determine the organisational determinants of job satisfaction in the South African renewable energy sector.

Motivation for the study: Job satisfaction remains a global challenge, including in the renewable energy sector in South Africa. In developing effective strategies for promoting job satisfaction, this study sought to determine the organisational factors that exert an influence on job satisfaction in this growing sector.

Research approach/design and method: A quantitative, descriptive and correlational study utilising an online and self-administered survey questionnaire was conducted among 59 employees at a renewable energy company in South Africa.

Main findings: All the organisational determinants identified for inclusion in this study were found to be positively and significantly correlated with job satisfaction. Regression analysis identified employee engagement, job security, benefits, remuneration and rewards to be significant predictors of job satisfaction.

Practical/managerial implications: While adopting a holistic approach to promoting employee job satisfaction, employers should consider prioritising employee engagement, job security and competitive benefits and remuneration packages to yield the most substantial impact on employee retention in the South African renewable energy sector.

Contribution/value-add: Insights gained into the organisational determinants of job satisfaction within the South African renewable energy sector can be used to inform evidence-based management practices.

Keywords: job satisfaction; renewable energy sector; employee engagement; employee retention; management; well-being; organisational culture.

Introduction

The pandemic's unprecedented circumstances brought about changes that positively influenced employee job satisfaction, notably the normalisation of blended and flexible work arrangements, now enduring features of the post-COVID work landscape (Gangisetty et al., 2024). However, these positive shifts are overshadowed by persistent challenges that continue to exert a negative influence on job satisfaction. Job insecurity remains prevalent (Abid et al., 2023), fuelled by concerns surrounding automation (Perrot et al., 2025), restructuring (Storman et al., 2025) and ongoing economic uncertainties (Godinić & Obrenovic, 2020) in some sectors. Further, the intense pressure and stress of the pandemic have contributed to widespread burnout (Zhou et al., 2022), with lingering emotional effects that continue to adversely affect employee well-being and, consequently, job satisfaction.

The PWC Global Workforce Hopes and Fears Survey – African Perspectives (2023) revealed that nearly half of the respondents felt that their skills were underutilised, and over a third were seeking new employment because of personal financial pressures. Adding to these factors, the Gallup State of the Global Workplace 2024 report indicates that sub-Saharan Africa represents the highest regional percentage of employees actively seeking new jobs, the second lowest rate of thriving employees and the second highest incidence of employees experiencing daily loneliness. While digital transformation, accelerated by the pandemic, has been positively linked to job

satisfaction (Mukherjee & Gopal, 2024), it has also burdened some employees with increased responsibilities and the need for rapid skills acquisition, negatively impacting their job satisfaction (Zhang et al., 2025).

Despite global concerns regarding job satisfaction, its crucial role in driving positive individual and organisational outcomes, and thus organisational competitiveness and sustainability, is well established (Bourne, 2020; Kurniawaty et al., 2019; Manivannan & Bhuvanewari, 2020; Tirta & Enrika, 2020). Organisations that safeguard job satisfaction benefit from reduced employee turnover (Ramlawati et al., 2021), enhanced talent retention (De Sousa Sabbagha et al., 2018; Tirta & Enrika, 2020), increased employee motivation (Pancasila et al., 2020), improved employee performance (Hendri, 2019; Paais & Pattiruhu, 2020) and improved organisational performance (Onyebuchi et al., 2019). Conversely, its absence negatively impacts employee engagement, organisational culture and employee performance (Natasya & Awaluddin, 2021). Therefore, organisations must actively cultivate the factors that enhance job satisfaction and mitigate those that diminish it.

Given the complex nature of job satisfaction and the diverse contemporary workforce, a 'one-size-fits-all' approach to fostering job satisfaction is ineffective (Hoole & Bonnema, 2015). Employees are shaped by unique combinations of geographic (Kazi et al., 2019), demographic (Kollman et al., 2020) and cultural backgrounds (Katsantonis, 2020). This, together with varying organisational and job experiences (Alrawashdeh et al., 2021), contributes to a wide range of factors influencing job satisfaction, and hence, a holistic approach is required to effectively foster job satisfaction.

Early research identified core factors influencing job satisfaction, including pay, co-workers, supervision, promotions and the intrinsic nature of work itself (Smith et al., 2019). Over time, this understanding expanded to encompass broader elements such as leadership style, organisational climate and the overall work environment. More recent studies have further refined these determinants with Barasa et al. (2018), highlighting work competence, motivation and organisational culture. Inegbedion et al. (2020) focused on employee perceptions of workload, and Goretzki et al. (2022) identified role-specific indicators.

An important contemporary consideration relates to the impact of remote work, with its associated freedom and flexibility, which has fundamentally altered employee needs and preferences (Alexander et al., 2021). Consequently, work-life balance has emerged as a significant priority. This shift has prompted a widespread re-evaluation of lives, careers, working conditions and long-term goals, a trend particularly pronounced among younger cohorts (Kromydas et al., 2022).

This study addresses job satisfaction at a company in the renewable energy sector in South Africa. This sector is experiencing rapid growth and plays a vital role in growing the South African economy, meeting environmental impact

reduction targets and reducing unemployment (Moyo, et al. 2017). With this growth comes a unique set of human resource challenges, including a high demand for specialised skills, technical knowledge and experience and rapid technological advancement requiring employees to adapt and learn new skills continuously (Odulaja et al., 2023). Further, geographic disparities may make it challenging to attract skilled workers and hence talent competition (Brannstrom et al., 2022). These human resource challenges highlight the importance of ensuring that employees experience job satisfaction.

The company that formed the focus of this study tracked job satisfaction using the employer net promoter score (eNPS) as part of a continuous performance management (CPM) system. However, this measure of job satisfaction was seen as potentially limited, as it provides only one metric, this being the extent to which employees would recommend the company to others as a place of employment. This metric does not reflect the complex and multifaceted nature of job satisfaction and its determinants. A more comprehensive understanding of the factors that drive job satisfaction was required.

Although job satisfaction is a widely researched phenomenon, no studies were encountered within the South African renewable energy sector. At the same time, the sector's rapid expansion, driven by national energy policy and global sustainability agendas, introduces distinct employment contexts related to specialised skills, project-based work and a workforce often motivated by environmental purpose alongside traditional employment factors. These unique operational and cultural dynamics warrant specific investigation into their impact on employee well-being and retention, as highlighted by authors including Ngema (2024), who highlighted the need for effective retention strategies, and Mabece and Fourie (2019) and Prah et al. (2021), who indicated that job satisfaction plays a critical role in the turnover of renewable energy professionals in South Africa. This study aimed to address this gap by identifying the organisational determinants of job satisfaction among employees at a renewable energy company, thereby providing foundational insights for this vital and under-researched industry.

Research purpose and objectives

The primary objective of this study was to identify the organisational determinants of job satisfaction among employees at a company in the renewable energy sector. In alignment with the main aim, the following secondary objectives were set:

- *To determine global job satisfaction among employees at the selected company.*
- *To identify the organisational determinants of job satisfaction for these employees.*
- *To examine the relationship between the organisational determinants of job satisfaction and global job satisfaction among these employees.*
- *To determine whether any of the identified organisational determinants exerted a predictive effect on global job satisfaction.*

This article commences with a literature review in which job satisfaction and the organisational determinants thereof are explored. This includes consideration of previous studies examining the relationship between job satisfaction and several factors. Thereafter, the research methodology is presented, including the measuring instrument, population, sampling technique and data collection process. The results are presented, followed by managerial implications, recommendations and limitations associated with the study.

Literature review

Job satisfaction

Global employee disengagement is high (62%), with employees reporting that they are struggling with life (58%); experiencing negative emotions like stress, anger and sadness (all over 20%) and actively seeking new employment (52%) (Gallup, 2024). These indicators, reflecting a lack of involvement, enthusiasm and overall well-being, strongly suggest widespread low job satisfaction, as disengagement is consistently linked to diminished fulfilment and increased intent to quit (Gallup, 2024; Winstanley, 2024). This is concerning, understanding that high job satisfaction is essential in fostering positive individual and organisational outcomes, including enhanced performance, productivity, engagement, motivation and talent retention (Bourne, 2020). Consequently, organisations must thoroughly understand job satisfaction and its promotion to develop effective strategies and solutions.

An examination of existing job satisfaction definitions reveals a common emphasis on an individual's affective and cognitive appraisal of their work, yet nuances persist regarding its precise scope and components. Early definitions often centred on a pleasurable or positive emotional state resulting from the appraisal of one's job experiences (Locke & Schattke, 2019). However, contemporary perspectives recognise job satisfaction as a more multifaceted construct, encompassing both emotional reactions and rational evaluations of various job aspects, including work conditions, supervision, pay and the work itself (Judge et al., 2020). While these definitions capture the subjective nature of satisfaction, it remains a challenge to fully appreciate its dynamic quality, as satisfaction levels can fluctuate based on changing individual needs and organisational contexts (Warr, 2007). Moreover, the interplay between global job satisfaction and satisfaction with specific job aspects continues to be a point of discussion, highlighting the complexity of the phenomenon.

The debate regarding whether job satisfaction is predominantly influenced by factors inherent in the work itself or by external factors is perhaps better understood by distinguishing between intrinsic motivation and extrinsic motivation. Intrinsic motivation, derived from the inherent enjoyment and fulfilment of the work (e.g. sense of achievement, personal growth and meaningfulness), directly contributes to intrinsic job satisfaction. Conversely, extrinsic motivation, driven by external rewards such as

pay, benefits, job security and working conditions, contributes to extrinsic job satisfaction (Thant & Chang, 2021). By recognising that both sets of factors play distinct yet often interconnected roles, researchers can move beyond a simplistic 'either/or' debate, acknowledging that comprehensive job satisfaction typically results from a complex interplay where individuals value both the core aspects of their work and the tangible and environmental supports provided by the organisation. In this study, job satisfaction was defined as an emotional state experienced by the employee, which is influenced by both dispositional factors, including personality, self-efficacy and growth aspirations, and situational factors, including working conditions, recognition, job security and relationships, and linked to the extent to which the employee's job-related needs and expectations are met.

Several established theories and models provide valuable frameworks for understanding job satisfaction. These frameworks underscore that employee fulfilment is a multifaceted concept. Drawing from Maslow's Hierarchy of Needs and Herzberg's Two-Factor Theory, the importance of meeting both basic and higher-order needs is emphasised, with motivational factors like recognition and achievement playing a crucial role (Thant & Chang, 2021). Adam's Equity Theory highlights the significance of perceived fairness in employee evaluations of their inputs and outputs (Jameel et al., 2020), while Locke's Range of Affect Theory emphasises the alignment between expectations and experiences, as moderated by individual values (Hoff et al., 2020; Wallbridge, 2022). Hackman and Oldham's Job Characteristics Model demonstrates how enriching job design, through elements like skill variety and autonomy, can positively influence satisfaction (Raihan, 2020). Finally, Staw and Ross's Dispositional Approach posits that personality traits and the overall work environment, including pay and job complexity, also significantly shape employee satisfaction (Henry & Miller, 2020).

Fostering job satisfaction, therefore, requires a comprehensive strategy that addresses these diverse considerations, ensuring that employees feel valued, treated equitably and regard themselves as engaged in meaningful work. This study, which investigates key organisational determinants, is primarily anchored in Herzberg's Two-Factor Theory. This framework is pertinent as it allows for a structured examination of how both intrinsic motivators (such as engagement and development) and extrinsic factors (such as remuneration, job security and perceived fairness) within an organisation collectively shape employees' overall job satisfaction.

In developing strategies to promote job satisfaction, large corporate companies, including Google and Starbucks, go above and beyond. This includes ensuring that employees are paid competitive salaries, maintain work-life balance, perform meaningful work, receive great health care, are recognised for their contributions and are provided with

good leaders (Bourne, 2020). These corporations regularly monitor job satisfaction to evaluate the ongoing effectiveness of implemented strategies.

As a measurable construct, tracking job satisfaction enables management to identify areas for improvement (Lepold et al., 2018). The tools available are diverse and possess distinct advantages and disadvantages. For instance, a pulse survey or eNPS comprising one or two items may better suit an organisation that seeks quicker and more frequent check-ins to determine job satisfaction, whereas a lengthier survey would allow for a more in-depth exploration of employee experiences (Welbourne, 2016). Although a survey provides a bigger picture, interviews provide opportunities to 'drill down' and gain a deeper and richer understanding of employee experiences of the phenomenon (Ferreira et al., 2021).

Organisational determinants of job satisfaction

Several intrinsic and extrinsic factors act as determinants of job satisfaction. For the purposes of this study, the focus was on organisational factors, these being training and development, job promotion, work–life balance, leadership style, employee engagement, organisational culture, job security and remuneration, management and communication and employee relationships.

Employee training and development require substantial organisational investment to ensure that employees are well equipped to handle current and future job requirements (Mobarak et al., 2019). Training and development play a role in attracting top talent, encouraging a culture of continuous learning and reducing employee turnover (Bottrell, 2023). Lin and Huang (2021) identified a positive relationship between training and job satisfaction in the telecommunications industry in Taiwan, and Davidescu et al., (2020) determined that employee development had a positive and significant impact on job satisfaction in a study conducted in Romania. Pinzone et al. (2019) identified a correlation between 'green' employee training, which centres on the achievement of corporate environmental targets and job satisfaction. The researchers attributed the resultant job satisfaction to the employee's perception of training as a form of employer support.

Research conducted in the banking industry in Rajasthan concluded that employee promotion is positively related to job satisfaction (Bhardwaj et al., 2021). Ellafi and Noor (2021) also identified a significant and positive correlation between promotion and employee satisfaction among employees in the public sector in Libya. A study of doctors in Vietnam revealed a positive correlation between employee satisfaction and job promotion, with an associated increase in income being a significant driver of job satisfaction (Vuong et al., 2020).

Work–life balance and well-being exist at the intersection of organisational and personal determinants. They are influenced by organisational determinants, including policies

and practices, organisational culture and leadership, and personal determinants, including values and personal circumstances. However, organisations have a significant responsibility to create work environments that support work–life balance and well-being. Research conducted by Kasbunturo et al. (2020) identified a significant and positive relationship between work–life balance and job satisfaction among employees in the banking sector in Jakarta. These results align with a study conducted in the agricultural sector in Indonesia, where work–life balance was found to have a significant impact on job satisfaction (Arief et al., 2021).

Leadership style, work environment and organisational climate were found to be major determinants of job satisfaction in studies conducted by Ahmad et al. (2020) and Subarto et al. (2021). Certain leadership styles have been found to exert a greater influence on job satisfaction. For example, a study by Eliyana and Ma'arif (2019) identified a correlation between positive transformational leadership and job satisfaction. Transformational leadership, characterised by charismatic influence, individualised consideration and effective communication skills, was further found to have a significant positive impact on job satisfaction among nurses in Italy (Specchia et al., 2021). Further, Qing et al. (2019) concluded that ethical leadership positively influences job satisfaction. However, not all leadership styles positively influence job satisfaction. For example, autocratic leadership was found to have a significantly negative impact on job satisfaction in a study conducted by Makhdoom and Daas (2022). Further, environmental conditions have been found to play a role in determining the most appropriate leadership style to promote job satisfaction. For example, transactional leadership had a positive impact on job satisfaction in the health sector (Makhdoom & Daas, 2022) and a significantly negative impact on the job satisfaction of employees in Thailand's private sector (Budiasih et al., 2020).

Although research has confirmed employee engagement as a determinant of job satisfaction, it is important to note that employee engagement is itself a broad construct that has been widely researched, including its own determinants. Moreover, it is possible for employees to be satisfied with their jobs without being engaged in their work (BasuMallick, 2021). Nonetheless, employee engagement plays an important role in promoting job satisfaction. Goestjahjanti et al. (2020) identified a significant positive correlation between employee engagement and job satisfaction among employees in Southeast Asian industries, as did Sudibjo and Sutarji (2020) in a study conducted among teachers in Jakarta. Within the South African context, specifically the sugar industry in KwaZulu-Natal, employee engagement was found to have a significant impact on job satisfaction (Moletsani et al., 2019).

An innovative, creative and flexible organisational culture has been found to significantly influence job satisfaction (Eliyana & Ma'arif, 2019; Fidyah & Setiawati, 2020; Kawiana et al., 2018). Organisational culture is often indicative of the

leadership style present in an organisation, and as indicated, certain leadership styles have been identified as having positive influence than others on job (Tran, 2020). Other aspects of organisational culture that influence job satisfaction include organisational beliefs, norms and values (Aranki et al., 2019).

Umrani et al. (2019) conducted a study among hospital physicians in Pakistan and determined that job security had a significant influence on job satisfaction. Ahmad and Jameel (2018) also identified a correlation between job satisfaction and job security, with job security defined as an employee's perception of continuous employment with associated pay. In a study conducted among South African health care workers, job security and remuneration were found to significantly influence job satisfaction (Merga & Fufa, 2019). Rapid technological development presents a unique challenge to job security. The uncertainty that technological advancement holds for the relevance of and requirements for some jobs could reduce perceptions of job security and, in turn, negatively influence job satisfaction (Bhargava et al., 2021). In addition to job security, employee benefits and remuneration significantly affect job satisfaction. Employee remuneration, especially when employees are motivated to work towards a promotion, has a significant positive impact on job satisfaction (Rapsanjani & Johannes, 2019).

The way in which employees are managed has been identified as a determinant of job satisfaction. So too has communication within the organisation. Transparent organisations have been found to comprise employees with higher levels of job satisfaction (Pratama, 2020) in comparison with organisations with ineffective communication, where employees feel 'left in the dark' (Pongton & Suntrayuth, 2019). Pang and Ruch (2019) found that when managers included mindfulness techniques in their interactions with employees, such as focussing intentionally on the feelings and non-verbal communication of employees, their job satisfaction increased. While management and communication may be seen as separate determinants of job satisfaction, they exert a combined effect when managers use their communication skills to ensure that employees meet organisational objectives (Fanelli et al., 2022).

Employees must engage with each other daily in pursuit of organisational objectives. Employees who have friendly relationships experience higher levels of job satisfaction (Tuba & Erkan, 2020), especially when these relationships are mediated by trust (Bulińska-Stangrecka & Bagieńska, 2021). Perceived employee relationships are also important to note. For example, managers who were perceived to be continuously on their smartphones when communicating with employees did not develop relationships with their subordinates, and this subsequently negatively influenced job satisfaction (Roberts & David, 2020).

In identifying the influence of these different organisational determinants on the job satisfaction of employees at a company in the South African renewable energy sector, the following research methodology was adopted.

Research design

Research approach and method

This study was conducted from a post-positivist perspective and adopted a quantitative approach (Cresswell & Cresswell, 2018). A descriptive and correlational design allowed for a comprehensive description of the phenomena under study and an exploration of their relationships. A survey method in the form of a self-administered online questionnaire was used as the data collection tool in determining employee experiences of job satisfaction and the organisational determinants thereof.

Research participants

Once ethical clearance was received for the study (H23-BES-BUS-039), permission to conduct the study at the company in the renewable energy sector was sought and obtained. This specific company was selected as the study was conducted by a masters' student, who was employed at the company at the time. The population comprised all employees ($N = 65$) working at all organisational levels in line and support functions, including engineering, project management, sales, finance, marketing, human resources management and other departments. While total population sampling was identified as appropriate for a study conducted in one organisation, a non-probability and convenience sampling technique was adopted, understanding that participation was voluntary.

A final sample of 59 was achieved, representing an 89% response rate. This represents almost a complete census of the target population within the selected company. Within the context of organisational research, the recommendations for determining sample size, proposed by Krejcie and Morgan and Cochran as discussed by Ahmad and Halim (2017), were considered. The authors advise a sample of 56 (86%) for a population of 65. Our sample thus meets this guideline. However, it is understood that despite the high response rate from the accessible population, the absolute sample size is relatively small. This inherently limits the generalisability of the findings to other organisations and broader sectors, representing a practical limitation of the study, which, because of its nature, was time and place bound.

Most of the respondents (54%) were male and above the age of 30 years (71%). The respondents were predominantly white people (45%) and black people (42%). Most held a position in engineering (19%), project management (19%) and sales (19%). Seventy per cent of the respondents held a tenure of 2 years or less, of which 29% had been employed for 1 year or less.

Measuring instruments and research procedure

The measuring instrument took the form of a self-administered survey comprising three sections:

Section A collected demographic data and provided for restricted responses.

Section B comprised a global measure of job satisfaction. For this purpose, the Hubstaff Employee Satisfaction Index (ESI) was utilised (Nevogt, 2025). This survey comprises three core items designed to capture the overall global job satisfaction (Thompson & Phua, 2012). Respondents rate their agreement to items dealing with their *satisfaction with the current workplace*, the *extent to which the current workplace meets personal expectations* and the *closeness of the current workplace to the ideal workplace* (Nevogt, 2025). The results of an ESI are seen to provide a good general index to measure improvement over time, but it is suggested that larger surveys allow for the identification of precise issues driving employee dissatisfaction (Van Vulpen, n.d.). The current eNPS item used by the company, this being the extent to which employees would recommend working at the company to others, was added to the ESI. These items were accompanied by five-point Likert-type response scales ranging from strongly disagree (1) to strongly agree (5). While internal consistency was not separately established for these four items in prior literature, Dolbier et al (2005) determined the reliability of a single-item measure of job satisfaction as high (0.90). This suggested the appropriateness of determining the reliability of a shortened scale as a global measure of job satisfaction. The Cronbach's alpha coefficient calculated for this scale in this study was 0.93, demonstrating excellent internal reliability (Nunnally, 1978).

Section C comprised a scale to identify the organisational determinants of job satisfaction. This scale, which comprised 48 items, was developed following a review of the literature and consultation with existing measures. Items were identified and modified for inclusion, based on their suitability for the context of the study, from existing measures. These included the Job Satisfaction Survey (JSS) (Spector, 1985), a 36-item scale describing nine job facets, with a demonstrated coefficient of 0.75 in the African context (Ogunkuade & Ojji, 2018); and the Minnesota Satisfaction Questionnaire (MSQ) (Weiss et al., 1967), comprising 20 items and demonstrating reliability of 0.86 in the South African context (Buitendach & Rothmann, 2009). Additional items were included based on the literature review of the factors considered in this study (e.g. Bottrell, 2023; Ibrahim, 2022; Makhdoom & Daas, 2022; Posel & Oyenubi, 2021; Tran, 2020; Zhou et al., 2022; Wickham, 2020). Items were accompanied by Likert-type response scales ranging from strongly disagree (1) to strongly agree (5). Table 1 presents the factors included in this scale and an item count for each factor.

TABLE 1: Organisational determinant factors and item counts.

Factor	Items
Leadership, management and communication	9
Development and training	6
Job promotion or advancement	4
Relationships	5
Work-life balance and well-being	6
Employee engagement	6
Job security, benefits, remuneration and rewards	6
Organisational culture	6

Cronbach's alpha coefficients calculated for the factors comprising this scale ranged between 0.74 and 0.94, thus demonstrating adequate to excellent internal reliability (Nunnally, 1978) in this study.

Data collection and analysis

The survey, which was administered on the QuestionPro platform, was circulated to all 65 employees by a company representative via an email containing a link to the survey. This followed a meeting in which the nature and purpose of the study were explained to all employees. Informed consent, which outlined the nature and purpose of the study, and highlighted the voluntary and anonymous nature of the survey, was electronically obtained.

The data, collected via an electronically administered survey, was returned in aggregate form for analysis and reporting purposes, making use of the STATISTICA Data Analysis Software System (Statsoft, 2025). Statistical analysis in the resolution of the objectives set for this study included descriptive statistics, these being measures of central tendency and dispersion. Inferential statistics included calculation of Pearson product moment correlations to probe for relationships between the organisational determinants of job satisfaction and global job satisfaction. Stepwise regression analysis allowed for a determination of the extent to which the factors influenced job satisfaction and thus for a more confident determination of which areas should be emphasised in promoting job satisfaction.

Ethical considerations

Ethical clearance to conduct this study was obtained from Nelson Mandela University, Faculty of Research Ethics Committee (H23-BES-BUS-039). Furthermore, institutional permission was sought and obtained from the relevant gatekeeper at the renewable energy company. Participation was voluntary, informed consent was sought and no personal or identifying information was collected from the respondents. In addition, data were returned as an aggregate via the QuestionPro platform, thus further ensuring respondent anonymity.

Results

Global job satisfaction

The first objective of this study was to determine global job satisfaction among employees at the selected company. This was established using Section B of the questionnaire. An aggregate mean score of 4.50 was obtained for these items, signifying high levels of agreement. The highest mean score of 4.64 was received for the eNPS item, with a standard deviation (SD) of 0.67 indicative of consistency of response. As indicated, while this scale can provide a snapshot of job satisfaction, no insight is provided as to the factors that drive job satisfaction. To this end, the organisational determinants of job satisfaction scale were utilised.

Organisational determinants of job satisfaction

The second objective dealt with identifying the organisational determinants of job satisfaction. To this end, responses to Section C of the questionnaire were analysed. This subscale assessed employee experiences linked to management, leadership and communication, employee development and training, job promotion or advancement, relationships, work–life balance and well-being, employee engagement, job security, benefits, remuneration and rewards, and organisational culture. In general, respondents largely indicated agreement, with aggregate mean scores exceeding 4.00 for all factors. The accompanying SD were suggestive of consistency of response ($SD < 0.80$) in most instances and hence similar respondent experiences.

Some findings warrant further consideration, particularly the interpretation of neutral responses. Fogle (2017) cautioned against overlooking neutral responses from employees as this can impact team performance and overall outcomes. A neutral response may represent masked feelings, which could lead to flawed conclusions. In terms of development and training, 30% of the responses in relation to the early identification and addressing of developmental needs were categorised as neutral or disagree. For job promotion, 27% of the respondents indicated neutrality or disagreement in relation to perceived promotional opportunities. With work–life balance and well-being, which are key determinants of job satisfaction (Kromydas et al., 2022), there was variation of response in relation to the ability to strike a balance between work and personal life ($SD = 1.02$) and a neutral or disagree response rate of 27%. In addition, perceptions of a fair workload attracted 34% neutral or disagree responses ($SD = 1.01$). In terms of job security, benefits, remuneration and rewards, high levels of agreement were reported. However, understanding that this is a small company, there are areas in which employees may be experiencing greater levels of dissatisfaction. These include 16% respondent neutrality or disagreement in relation to perceptions of having a future with the company, 22% in relation to fair pay, 19% in relation to receiving recognition for good work and 18% in relation to work being appreciated. With organisational culture, neutral or disagree responses of 14% were received in relation to leaders being viewed as able to effectively resolve ethical dilemmas.

Relationship between global job satisfaction and organisational determinants

The third objective aimed to determine the relationship between global job satisfaction and the organisational determinants of job satisfaction. This required that confirmatory factor analysis (CFA) be conducted to verify the factor structure of Sections B (global job satisfaction) and C (organisational determinants of job satisfaction) of the measuring instrument, given that these scales largely comprised items from existing measures. In testing model validity, two important considerations were observed: firstly, ensuring that all parameter estimates were statistically significant (p -value < 0.05), and secondly,

TABLE 2: Results of the EFA.

Factor	Total variance explained			Extraction sums of squared loadings			Rotation sums of squared loadings
	Initial eigenvalues			Total			
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	
1	4.38	48.68	48.68	4.036	44.844	44.844	3.744
2	1.66	18.39	67.06	1.256	13.961	58.805	2.731
3	0.98	10.84	77.90	-	-	-	-
4	0.58	6.42	84.33	-	-	-	-
5	0.54	5.96	90.28	-	-	-	-
6	0.34	3.79	94.07	-	-	-	-
7	0.25	2.82	96.90	-	-	-	-
8	0.17	1.93	98.83	-	-	-	-
9	0.11	1.17	100.00	-	-	-	-

Notes: Extraction method: Principal axis factoring.

assessing the model fit through a combination of goodness-of-fit indices (Schermelleh-Engel & Moosbrugger, 2003). In calculating CFAs for Sections B and C, the only factor that had no significant pathways and yielded a poor model fit was the organisational determinant of leadership, management and communication. Given this and in exploring potential underlying structures, Exploratory Factor Analysis (EFA) was conducted for the items for this factor as per Table 2.

The EFA revealed two factors that accounted for a cumulative 59% of the variation in the ratings. Based on the pattern matrix and factor loadings, these factors were interpreted and labelled as *Management* and *Leadership* for purposes of further analysis. This is because the items loading against factor one made specific reference to the role of the manager, whereas the items loading against factor two made specific reference to the leader.

Pearson's correlation coefficients were then calculated as presented in Table 3 to determine the relationship between the variables of interest.

Significant and positive correlations were identified between all the organisational determinants and global job satisfaction ($p < 0.01$), except for Employee Development and Training ($p < 0.05$), which demonstrated a moderate correlation. This indicates substantial practical relationships between these factors and job satisfaction. Further, significant and positive relationships emerged between the determinants themselves, with these correlations emerging as either strong or moderate. This indicates a significant degree of interconnectedness and interdependence among these factors. This suggests that improvements or issues in one determinant are likely to be accompanied by corresponding changes in other determinants, forming a more holistic and integrated experience for employees.

Predictors of job satisfaction

The fourth objective aimed to determine whether any of the organisational determinants of job satisfaction exerted a predictive effect on global job satisfaction. To this end,

TABLE 3: Correlation matrix – Global job satisfaction and organisational determinants ($N = 59$).

Determinants	JP/A	R	W-L B	EE	JS, B, R&R	OC	JS	ED&T	M	L
JP/A	1.000	0.604**	0.557**	0.464**	0.687**	0.575**	0.536**	0.609**	0.537**	0.510**
R	-	1.000	0.416**	0.509**	0.539**	0.393**	0.520**	0.356*	0.473**	0.384**
W-L B	-	-	1.000	0.659**	0.674**	0.645**	0.660**	0.675**	0.381**	0.544**
EE	-	-	-	1.000	0.796**	0.686**	0.791**	0.541**	0.443**	0.566**
JS, B, R&R	-	-	-	-	1.000	0.801**	0.873**	0.568**	0.515**	0.694**
OC	-	-	-	-	-	1.000	0.799**	0.569**	0.386**	0.806**
JS	-	-	-	-	-	-	1.000	0.551**	0.410**	0.594**
ED&T	-	-	-	-	-	-	-	1.000	0.619**	0.333*
M	-	-	-	-	-	-	-	-	1.000	0.334**
L	-	-	-	-	-	-	-	-	-	1.000

Notes: Significant statistical correlations are shown in boldface.

JP/A, job promotion/advancement; R, relationships; W-L B, work-life balance and well-being; EE, employee engagement; JS, B, R&R; job security, benefits, remuneration and rewards; OC, organisational culture; JS, job satisfaction; ED&T; employee development and training; M, management; L, leadership.

*, $p \leq 0.05$; **, $p \leq 0.01$.

TABLE 4: Regression analysis – Organisational determinants of job satisfaction.

Determinant	β	SE	t	p
Job security, benefits, remuneration and rewards	0.68	0.135	5.027	< 0.001
Employee engagement	0.47	0.173	2.707	0.011

SE, standard error.

regression analysis was conducted. The first regression model employed was the direct model. However, this analysis revealed that some of the factors had a variance inflation factor greater than five, which indicated a high level of correlation between the predictor factors themselves, raising concerns about multicollinearity. For this reason, a stepwise regression was performed. This process automatically excluded job promotion/advancement, relationships, work-life balance and well-being, organisational culture, employee development and training, management and leadership as they did not contribute significant, unique predictive power to the model. The resulting stepwise regression model delivered was statistically significant ($F = 69.534$, degrees of freedom [df] = 2, $p < 0.001$) with an R -squared value of 0.808. This indicates that the determinants included in the final model account for 80.8% of the variation observed in the dependent variable (job satisfaction). The two determinants found to be statistically significant predictors were (1) *job security, benefits, remuneration and rewards* and (2) *employee engagement* (Table 4).

Discussion

This study addressed job satisfaction in the growing renewable energy sector in South Africa. This sector is faced with challenges related to skills acquisition, development and retention. The focus of this study was on identifying the organisational determinants of job satisfaction among employees at one company in the sector with a view to informing strategies to enhance job satisfaction and ultimately contribute to the management and retention of employees in this sector in South Africa.

In general, employees reported high global levels of job satisfaction and positive experiences of factors identified as promoting job satisfaction, these being management, leadership and communication, employee training and development, job promotion, professional relationships, work-life balance and well-being, employee engagement, job security, benefits, remuneration and rewards and

organisational culture. These findings are encouraging considering the low levels of job satisfaction reported globally, including in South Africa (Gallup, 2024), and the positive individual and organisational outcomes associated with job satisfaction, including higher levels of performance and increased retention (Bourne, 2020). Particular areas of strength that could be leveraged by the company in promoting job satisfaction include the positive manner in which leaders and/or managers are viewed, particularly as it relates to providing a clear vision and communication, the culture of learning suggested by responses to training and development, the strong sense of team that emerges, the organisational focus on well-being and the fact that the respondents reflected pride and pleasure in their work.

Little variation of response was encountered in exploring the determinants, which suggests that, in general, the respondents shared similar experiences. However, there are areas in which variation in response patterns was identified, which may require closer examination. This includes the need to identify and address developmental needs early. This is important in understanding the role played by training and development in attracting top talent, promoting a culture of continuous learning and reducing employee turnover (Bottrell, 2023). It is also important to consider the potential for skills shortages or knowledge gaps that may arise because of rapid changes linked to technological advancements in the renewable energy sector. Further, opportunities for job promotion or advancement may not always present themselves clearly to all employees in a smaller organisation, such as the company in this study. This suggests that opportunities for promotion/advancement should be more clearly identified by relevant line managers, including the potential linked to role transfers (Ibrahim, 2022). Further, some employees may not hold a positive view of their futures with the company. This may be cemented by clear investments in future-focused skills acquisition, career planning and succession planning.

Another area for consideration identified by the study's findings pertains to work-life balance and perceptions linked to unequal workloads. Addressing these concerns could involve leveraging performance management processes to assess workload distribution fairly. Further, the pandemic has significantly reshaped perspectives on

work–life balance and led to a strong preference for greater freedom and flexibility (Alexander et al., 2021). Organisations should explore implementing flexible working arrangements for roles not tied to the physical workplace. In addition, while organisations hold a key responsibility for fostering a supportive environment through providing wellness programmes and interventions, promoting open communication and implementing clear work–life boundaries, employees are also responsible for taking ownership of their physical, mental and emotional health. This can include actively engaging in well-being practices, including stress management, prioritising physical health and setting and adhering to work–life boundaries.

The neutral and disagree responses received in relation to leaders resolving ethical dilemmas could be examined. This is an important understanding that ethical leaders positively influence job satisfaction through their demonstration of moral norms and beliefs (Qing et al., 2019).

The results further identified significant and positive relationships between all the organisational determinants of job satisfaction and global job satisfaction. These results align with findings from studies that established relationships between job satisfaction and the factors examined in this study, namely employee training (Davidescu et al., 2020); job promotion (Ellafi & Noor, 2021); work–life balance and employee well-being (Arief et al., 2021); employee engagement (Goestjahjanti et al., 2020); organisational culture (Eliyana & Ma'arif, 2019); job security, benefits, rewards and remuneration (Umrani et al., 2019) and employee relationships (Chin, 2022). In addition, (1) *job security, benefits, rewards and remuneration* and (2) *engagement* emerged through stepwise regression analysis as the factors with the greatest impact on job satisfaction and hence as important predictors of job satisfaction. These factors represent key focus areas for the company in any strategy aimed at enhancing job satisfaction. However, the significant and positive relationships that emerged between the determinants themselves provide evidence of the holistic nature of job satisfaction, which should also be considered in strategy development.

Practical implications

Job satisfaction is a multifaceted psychological response to one's work, stemming from an evaluation of both intrinsic factors, such as the work itself, achievement, recognition and growth opportunities and extrinsic factors, including compensation, working conditions, supervision and relationships with colleagues (Bourne, 2020; Judge & Klinger, 2008). Further, job satisfaction is influenced by the interplay of individual employee characteristics and the unique attributes of work environments and circumstances (Katsantonis, 2020; Kazi et al., 2019; Kollman et al., 2020). Organisational leaders should prioritise the promotion of job satisfaction to realise the associated positive individual and organisational outcomes. For this reason, the following recommendations emerge from the findings of the study:

- In promoting job satisfaction, it is important that organisations clearly identify the specific determinants within each unique organisational context. This means that when job satisfaction is assessed, organisations should consider a range of determinants in developing job satisfaction measures.
- While global measures provide a brief overview of job satisfaction, they do not provide a comprehensive understanding of its determinants. However, global measures, including the eNPS, the ESI and other pulse surveys, can be effectively incorporated as periodic and frequent check-ins within a broader organisational CPM system.
- It is important that organisations assess job satisfaction on a more regular basis to understand the potential influence that rapid organisational change may have on job satisfaction. This will, for instance, assist in the early identification of developmental needs and provide security for employees in their ability to meet future skills requirements.
- It is important that the role played by demographical factors, such as tenure, generational cohort and gender, be monitored to determine whether these factors exert an influence on job satisfaction or its determinants. This consideration is raised, bearing in mind the differing expectations of generational cohorts in the contemporary workplace.
- It is important that organisations promote conditions that are seen to foster job satisfaction. This could include providing leadership development programmes that include ethical decision-making, ensuring that organisational policy allows for flexible working arrangements that promote work–life balance and identifying growth opportunities for employees that satisfy their needs for advancement. With the latter, it may be advantageous to implement succession planning and other knowledge and skills transfer mechanisms to ensure a future focus on skills acquisition.
- It is important that employees are encouraged to actively seek out strategies to promote their personal well-being. This includes the role played by personal counselling, a healthy diet and exercise, time off, time management, energy management, mindfulness, self-compassion, digital detoxing and job crafting as examples. Strategies deployed should take into consideration the nature of the job and associated role demands.
- It is important that, understanding that (1) *job security, benefits, remuneration and rewards* and (2) *employee engagement* emerged as significant predictors of job satisfaction, organisations ensure that efforts to promote engagement and job security are continuously maintained and that market trends in terms of remuneration and reward are observed as part of a broader talent management strategy.

Limitations and future research

The study was conducted within one company in one sector, this being the renewable energy sector, and the sample size

of 59 is relatively small. It is recognised that access to a larger and more diverse sample may have influenced the findings. This limits the generalisability of the findings to other organisations and sectors. However, understanding that job satisfaction remains a challenge across most industries in the South African public and private sectors, it offers a perspective on the unique interplay of organisational determinants influencing job satisfaction within this specific, yet strategically important and rapidly growing sector. While the study is limited to the extent that it represents the impressions of respondents at one company, it establishes a preliminary research benchmark for the South African renewable energy sector.

This article focused on the role played by organisational factors and did not consider the influence of personal determinants of job satisfaction, including disposition, self-esteem, self-efficacy, values and individual circumstances, including life stage (e.g. Munir & Chachar, 2025). These elements could be included in future studies of a similar nature. A final limitation pertains to the tenure of the respondents. As the company is relatively new, most respondents had been employed for a maximum of 2 years at the time the study was conducted.

Future research could include the use of a broader and more diverse population to assess the applicability of the findings of this article. Further studies could also include cross-sectional studies over time to determine how job satisfaction is influenced by changing organisational dynamics, conditions and circumstances. It would be interesting to determine whether leadership and line management exert differing influences on job satisfaction. It would also add value to determine whether the predictive effect of engagement, job security, remuneration and reward emerges in studies conducted in other industries. In addition, qualitative studies may be valuable in gaining a richer and deeper understanding of the phenomenon. Transnational studies would assist in identifying whether the determinants of job satisfaction in the renewable energy sector differ from one country to another. Finally, studies quantifying the benefits associated with prioritising job satisfaction by capturing changes in organisational and employee performance could provide support for the importance of ensuring job satisfaction in the renewable energy sector in South Africa.

Conclusion

The study on which this article is based sought to identify the organisational determinants of job satisfaction within the renewable energy sector. The study demonstrated that employees held positive experiences of job satisfaction and of the factors that influence job satisfaction. The study highlighted the complex nature of job satisfaction as all the factors identified for inclusion in this study were found to correlate with global satisfaction. Further, two factors emerged as significant predictors of job satisfaction, these being (1) *job security, benefits, remuneration and rewards* and (2)

engagement. The challenge emerging for leaders, managers and HR practitioners from this study is to adopt holistic strategies that provide the environmental conditions necessary in promoting job satisfaction. Part of this requires that job satisfaction is regularly monitored to determine the influence of changing circumstances thereon.

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Competing interests

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Authors' contributions

A.M. conducted the study upon which this article is based under the supervision of B.d.V. The article represents a summary of some of the findings of the study. In developing this article, B.d.V. was the primary author. The structure and content of the article were discussed between the authors, who both contributed to the final manuscript.

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Data availability

The data that support the findings of this study are available from the corresponding author, B.d.V., upon reasonable request.

Disclaimer

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