



Original article

The influence of job resources on platinum mineworkers' work engagement and organisational commitment: An explorative study

Martina Kotzé^{a,*}, Petrus Nel^b^a UFS Business School, University of the Free State, Internal Post Box 17, P.O. 339, 9300, Free State, Bloemfontein, South Africa^b Department of Industrial Psychology and People Management, College of Business and Economics, P.O Box 524, 2006, Auckland Park, University of Johannesburg, South Africa

ARTICLE INFO

Keywords:

Job resources
Mineworkers
Work engagement
Organizational commitment
Platinum mining industry

ABSTRACT

Despite various challenges in the platinum mining industry, management has to pursue stringent performance outcomes on an ongoing basis. The achievement thereof requires a motivated, involved and dedicated workforce. This can only be achieved when mineworkers are engaged in their jobs and committed to their organisation. Past research shows that formal and informal job resources can influence employees' levels of work engagement, as well as their organisational commitment. The purpose of this research was to explore whether mineworkers' perceptions of their organisation's job resources have an influence on their work engagement and organisational commitment. The findings show that both organisational respect and employee care have a statistically significant positive influence on work engagement and organisational commitment. However, employee care had a stronger influence on both work engagement and organisational commitment than organisational respect. To increase the work engagement and affective organisational commitment of mineworkers, it is proposed that mining companies invest in workplace practices that enhance employees' emotional attachment to the organisation.

1. Introduction

South Africa is the world's largest producer of platinum (Cairncross and Kisting, 2016), and the country contains 87% of the world's platinum group metals (Chaskalson, 2016). Hence, it accounts for a large proportion of national foreign exchange earnings, is a major source of employment, and impacts on the socio-economic mobility of South African communities (Federation for a Sustainable Environment, 2018). According to Björnsson (2018), 41% of the 490 000 people who were employed in the South African mining sector in 2015 were employed in the platinum mining industry. Many of these employees are migrants who leave their families behind in rural areas or in neighbouring states (Federation for a Sustainable Environment, 2018).

Many demands are associated with the mining work environment, such as mine closure threats, strikes, adverse working conditions, health and safety risks, excessive production targets, and cultural diversity (Abrahamsson et al., 2014; Masia and Pienaar, 2011; Moraka and Jansen van Rensburg, 2015; Neingo and Tholana, 2016). The North West platinum corridor (Rustenburg, Marikana, Brits), often referred to as the Platinum Belt (Rajak, 2016), is known as the site of the Marikana Massacre. In 2012, 34 mineworkers were shot dead by the South

African Police Service during a protest fuelled by poor working and living conditions, as well as a drive to increase wages (Bezuidenhout and Buhlungu, 2015; Capps, 2015). The Marikana Massacre brought to light fatal contradictions in the post-apartheid platinum mining sector. It was clear that the rapid growth in this sector since the first South African democratic election in 1994 did not bring the 'comparable expected gains' in living conditions and wages for mineworkers, which Chaskalson (2016, p. 872) attributes to 'the entry of a BEE elite into the higher echelons of mining capital'. The latter 'reinforced rather than challenged the state's direct interest in keeping mines as profitable as possible' (ibid).

After the Marikana Tragedy, several wildcat strikes followed, affecting the productivity levels of the platinum mines. In 2012 the South African platinum supply fell to its lowest level since 2001 as a result of the decline in grades, increased input costs, rising costs of salaries, transport and electricity, the high cost of underground mining practices (in comparison to open-cast platinum mining practices elsewhere), as well as safety stoppages (Capps, 2015; Genc and Jerome, 2014; PWC, 2017). Although 2019 showed indications of a recovery in profitability in the South African platinum industry – mostly due to a weaker rand (exchange rate), an improved basket price, and the benefits of previous

* Corresponding author.

E-mail addresses: kotzem@ufs.ac.za (M. Kotzé), petrusn@uj.ac.za (P. Nel).<https://doi.org/10.1016/j.exis.2020.01.009>

Received 9 September 2019; Received in revised form 16 January 2020; Accepted 16 January 2020

Available online 28 January 2020

2214-790X/ © 2020 Elsevier Ltd. All rights reserved.

cost restructuring and strategic refocusing of operations – increased costs and weak production are still evident (PWC, 2019).

These circumstances pose additional challenges to the management of the workforce in the Platinum Belt, who, despite these demands, has to pursue stringent performance outcomes on an ongoing basis. The achievement thereof requires a motivated, involved and dedicated workforce. In South Africa, the effective management of the evolving workforce is one of the most important challenges in the mining industry today (KPMG, 2019).

According to Hoole and Bonneman (2015), an engaged workforce can increase the required competitive advantage of companies to survive in the present economic landscape. As positive emotions, motivational energy and mental resilience are encapsulated in high levels of work engagement, engaged employees display behaviour that relates to specific positive outcomes. It enhances individuals' capability to invest their efforts in work activities that yield an increase in performance over time. Therefore, engaged employees' performance is superior to the performance of non-engaged employees (Allesandri et al., 2018). Those who are actively engaged in their work tend to cope better with excessive demands in their work environment, adapt more readily to organisational change, and inclined to overcome workplace challenges in creative ways (Bakker and Demerouti, 2008; Geldenhuys et al., 2014; Othman and Nasurdin, 2012; Parent and Lovelace, 2015; Paul and Maiti, 2007; Sorenson, 2013; Vokić and Hernaus, 2015; Youssef and Luthans, 2007).

Employees' affective attitudes also influence their commitment to their organisations. Employees who have positive perceptions and experiences of their organisation, have enhanced levels of affective organisational commitment, and are subsequently more prepared to invest in and contribute to the organisation. They also tend to stay longer with the organisation. Past studies showed that employees' organisational commitment plays a paramount role in the success and profitability of the organisation (Casper et al., 2002; Mercurio, 2015) as it enhances organisational performance (Bandula and Jayatilake, 2016; Rashid et al., 2003; Singh and Karki, 2015).

Since both work engagement and organisational commitment enhance organisational performance (Cheche et al., 2017; Singh, 2019; Singh and Karki, 2015), the challenge for managers in mining companies is to counteract the negative implications of the challenging job demands and work environment by positively influencing employees to keep them engaged in their work and committed to the organisation. The job demands-resources (JD-R) model (Bakker and Demerouti, 2007) proposes that occupational stresses and strains are caused by job demands and mitigated by job resources. Job demands can be physical, psychological, social or organisational in nature. In the mining industry, typical job demands are safety hazards, excessive production targets, job insecurity, and working in remote and socially isolated areas. These demands have physical or psychological costs and require sustained physical or psychological effort. On the other hand, job resources refer to those aspects of the job that reduce the job demands, as well as the related psychological and physiological costs thereof. They can be derived from the organisation, from the task itself, or from social relations at work, such as co-worker support, job security, autonomy, and developmental and advancement opportunities. Job resources may be formal or informal. For instance, organisations can provide formal support by means of organisational practices or policies (e.g., health and safety policies, well-being programmes), and informal support by means of managerial and supervisor support. Employees see supportive job resources as resources they can use to buffer job demands, and motivate them intrinsically or extrinsically (Bakker et al., 2011; Bakker and Demerouti, 2008; Hammer et al., 2009; Rhoades and Eisenberger, 2002).

In comparison to job demands, job resources are more strongly associated with positive outcomes, such as work engagement and organisational commitment (Allen and Shanock, 2013; Hakanen et al., 2005). When employees' perceive their organisations' practices as

supportive, respectful and caring towards them, it enhances their desire to deal with their work demands effectively, and it positively influences their affective attitudes towards their work and organisation (Mphahlele et al., 2018; Sonnentag, 2017). Past studies in the mining industry showed statistically significant relationships between work engagement and job resources, such as social support, autonomy (Mostert and Rathbone, 2001), and leadership style (Bezuidenhout and Schultz, 2013). With regard to organisational commitment, a study in the gold mining industry in Ghana (Amponsah-Tawiah and Mensah, 2016) showed that employees' perceptions of health and safety management practices influence their organisational commitment, while a South African study in a mine in Mpumalanga indicated a statistically significant relationship between managers' leadership styles and organisational commitment (Mclaggan et al., 2013).

Due to the crucial role that employees' affective attitudes play, Mercurio (2015) stresses the importance of identifying and researching those job resources that are able to enhance the emotional attachment of employees to their organisations specifically. To date, few empirical studies have investigated the role of job resources in the work engagement and organisational commitment of employees in the platinum mining sector. Therefore, the purpose of this research was to fill this gap by exploring the influence of job resources on platinum mine-workers' work engagement and organisational commitment.

2. Work engagement and organisational commitment

2.1. Work engagement

Among the various definitions, the common denominators in defining work engagement are the energetic, enthusiastic and passionate drive that employees display in attaining their work goals while feeling completely involved and committed in the execution of their job tasks (Macey and Schneider, 2008; Markos and Sridevi, 2010; Schaufeli, 2013). Although Schaufeli (2013, p. 25) describes work engagement as 'a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption', many researchers regard dedication and vigour as the 'core components' of work engagement (Schaufeli, 2013; Taris et al., 2017). 'Vigour' means that employees approach their tasks with a high level of motivational energy characterised by mental resilience and sustained effort, while 'dedication' refers to experiencing a sense of significance about one's work, and at the same time feeling inspired, challenged and proud in the execution thereof (Schaufeli et al., 2002; Sonnentag, 2017). Employees with high levels of vigour and dedication have superior ways to manage job demands and challenges, while also managing their physical and psychological well-being (Mache et al., 2014; Schaufeli and Bakker, 2004; Waddell, 2015).

Employees who are emotionally engaged in their work feel happy and experience other similar pleasant feelings about their work (Kahn, 1990). Therefore, it can be seen as a psychological state in which employees feel a close involvement in their organisation's success. They draw from their membership of the organisation, and from their work itself, a high level of personal satisfaction, affirmation and inspiration. This motivates them to keep to high standards when completing their tasks, even exceeding the stated job requirements in order to meet service demands and performance targets. Hence, work engagement can be directly linked to increased productivity and less absenteeism (Christian et al., 2011; Gülbahar, 2017; Hakanen and Schaufeli, 2012; Macey and Schneider, 2008; Schaufeli and Bakker, 2010; Soane, 2013; Sonnentag, 2017).

2.2. Organisational commitment

Organisational commitment refers to an attitude or psychological state characterising employees' relationships with their employer and subsequently influencing their decisions to stay or leave the

organisation. Meyer et al. (1993) propose that organisational commitment consists of three components: affective-, normative- and continuous organisational commitment. Affective organisational commitment relates to employees' emotional attachment to the organisation, while normative commitment involves an obligation to remain in the organisation due to a strong feeling of responsibility to the organisation. Continuous commitment is the result of the calculated perceived economic and social costs of leaving the organisation. Employees with high levels of continuous commitment stay at the organisation because they *need to*, while employees with high levels of affective commitment stay with the organisation because they *want to* (Meyer et al., 2002). As a result of their positive perceptions and experiences with the organisation, employees with a high level of affective commitment experience feelings of warmth, affection and loyalty towards the organisation and have a strong desire to stay with the organisation (Casper et al., 2011). Therefore, affective organisational commitment has the strongest influence on employees' work behaviours and is regarded as the 'core essence' of the organisational commitment construct (Mercurio, 2015).

3. Job resources and its relationship to work engagement and organisational commitment

Employees' perceptions of supportive job resources shape their affective attitudes towards their organisation. For instance, job demands, such as excessive production targets, may undermine employees' perceptions of their employers' respect and care for them, especially if they feel there is a lack of formal and informal workplace support to achieve these targets (Liao, 2011). Empirical evidence shows that when employees perceive their organisation's practices as non-supportive or insufficient, it may leave them overwhelmed, despondent, or even cynical towards their organisation as they are not able to manage the demands of their job effectively (Duong et al., 2015).

Organisational respect is defined as formal workplace practices that reflect employers' trustworthiness and ethical behaviour, as well as how much they value their employees. *Employee care* is an informal job resource that refers to employees' perceiving their managers or supervisors as caring, prepared to listen to them, paying attention to their concerns, and treating them well (Parker and Hyett, 2011). By expressing concern for the well-being of employees, valuing their work, and assisting them in their career development, managers are creating a supportive and caring climate (Paterson et al., 2014). On the other hand, when workplace conditions and practices reflect a lack of attentiveness to employee workloads, concerns and well-being, it is indicative of management failing to value their employees (Dollard and Bakker, 2010). This diminishes the resources that could help them cope with their job demands (Alzyoud et al., 2015; Dollard and Bakker, 2010).

Both formal and informal job resources can influence employees' levels of work engagement (Alzyoud et al., 2015; Halbesleben, 2010), as well as their organisational commitment (Allen and Shanock, 2013). Therefore, effective managers and supervisors can counteract high job demands by increasing job resources, keeping employees engaged, and ensuring higher levels of well-being. On the other hand, 'poor quality relationships between managers and employees is characterised by job demands swamping employees until they become disengaged' (Brunetto et al., 2014, p. 2348). When employees experience care and goodwill from their employer and supervisors, they also feel more commitment towards the organisation (Kehoe and Wright, 2013; Morrow, 2011; Park et al., 2014). A longitudinal study including a sample of over 500 employees in their first year of employment showed that employees' perceptions of organisational support are related to their level of organisational commitment (Allen and Shanock, 2013). This is due to employees perceiving supportive workplace practices as an indication of the organisation's commitment to them, and in return, they display higher levels of organisational commitment (Eisenberger et al., 1986; Park et al., 2014).

4. Purpose and context of the study

4.1. Purpose

The purpose of the study was to explore the influence of job resources (organisational respect and employee care) on platinum miners' work engagement and organisational commitment.

4.2. Context of the study

The Bushveld Igneous Complex (BIC), situated in the North West province, Limpopo and Mpumalanga, is home to South Africa's platinum deposits (Chaskalson, 2016). The present study was conducted in the North West province, in the Platinum Belt, described by Rajak (2016, p. 932) as a 'patchwork of industrial zones', each under the domain of one of many multinationals 'that mine the rich seams of the reefs below' – translating 'into an awkward social topography above ground'. The study included nine different platinum mines in and around the city of Rustenburg, and it was conducted as part of a larger interdisciplinary project.

Platinum mining in and around Rustenburg started during the 1920s, but only vastly expanded during the late 1980s. In contrast to the decline of many of the other South African mining areas over the last three decades, the platinum boom contributed to a large-scale influx of people (mostly male migrant workers) into Rustenburg, a huge expansion in infrastructure and investment, and a large number of informal housing settlements. This changed the face of the town (Bezuidenhout and Buhlungu, 2015). Between 1990 and the first decade of the 21st century, Rustenburg became one of the fastest-growing urban economies in the country. As platinum replaced gold in the South African mining sector, Rustenburg became the headquarters of platinum mining in the country (South African Cities Network (SACN), 2017; Marais et al., 2019).

5. Methods

5.1. Sample

During this multidisciplinary study, fieldworkers collected data from mining households using random sampling. Approximately 2323 individuals completed various sections of a household survey. The bulk of the survey focused on the economic and socio-economic aspects of mining and society. For example, access to running water, type of dwelling, and municipal services were investigated. A sub-section of the household survey focused on mineworkers' perceptions of the job resources (i.e., workplace practices) available to them, and their levels of work engagement and organisational commitment. Useable data from 202 mineworkers were analysed – constituting our sample. The sample for the present study consisted of non-managerial skilled and semi-skilled mineworkers. The latter include plant and machine operators and assemblers, technicians and trade workers, and services and sales workers.

5.2. Measurement

The constructs were measured as follows.

Work engagement (dependent variable): The two core components of work engagement (vigour and dedication) were measured using the short form of the Utrecht Work Engagement Scale (UWES). Work engagement was treated as unidimensional (de Bruin and Henn, 2013; Schaufeli et al., 2006, 2002).

Affective commitment (dependent variable): Three items from the Organisational Commitment Scale (Meyer et al., 1993) were used to measure affective organisational commitment.

Organisational respect for employees (independent variable): Seven items from the Work Well-Being Questionnaire (Parker and Hyett,

2011) were used to measure this variable. The items measure the extent to which employees perceive the senior management of their organisation as trustworthy and whether their organisation values and treats them well.

Employee care (independent variable): Seven items from the Work Well-Being Questionnaire (Parker and Hyett, 2011) were used to measure the extent to which employees perceive their managers and supervisors as willing to listen, understanding of their work-related concerns, and caring in general.

5.3. Data analysis

Reliability estimates associated with the four variables were determined using Cronbach’s alpha. Values of 0.6 and higher are indicative of reliable measures (Field, 2005; Hair et al., 2006, pp. 137, 778). To determine the extent to which organisational respect for employees and employee care (independent variables) are related to both work engagement and organisational commitment (dependent variables), Pearson’s Product Moment Correlation and Multiple Regression were used (Field, 2005; Hair et al., 2006).

6. Findings

6.1. Sample characteristics

The majority of the sample (64%) have been living in Rustenburg for 10 or more years. Most of the respondents (69%) worked for one of the major platinum mines in the area, while 31% worked at eight other platinum mines. Individuals are employed as plant and machine operators and assemblers (25%), technicians and trade workers (19%), and services and sales workers (12%). The majority of this sample is male (87%) and Black (98.5%). In terms of home language, the majority of the sample speak Setswana (55%), isiXhosa (20%), or Sesotho (14%). Fifty-two per cent of the sample are married, while 6% are living with a partner. In terms of union membership, the majority belong to a union (62%). Approximately 75% of the respondents stated that their employers deducted money for medical aid, while approximately 95% had deductions for pension.

6.2. Overall levels of work engagement, organisational commitment, organisational respect for employees, and employee care

From Table 1 below, it is clear that the mineworkers have above-average levels of work engagement and organisational commitment (dependent variables). In addition, they seem to perceive their organisation’s workplace practices as reflecting organisational respect, as well as caring for its employees (independent variables). It should also be noted that all four variables have acceptable reliabilities (0.7 and higher).

6.3. Correlations between organisational respect for employees and employee care (independent variables) and work engagement and organisational commitment (dependent variables)

Both the independent variables (organisational respect and employee care) were statistically significantly correlated with work

Table 1
Descriptive statistics (n = 202).

Variable	Minimum	Maximum	Mean	Standard deviation	Cronbach’s alpha
Employee Care	2	7	5.4064	0.92975	0.962
Affective Organisational Commitment	1	7	4.8547	1.51962	0.932
Organisational Respect	2	7	5.0909	1.03700	0.890
Work Engagement	2	7	5.2055	0.84515	.948

Table 2
Correlations between independent variables and both work engagement and organisational commitment (n = 202).

Independent Variables	Dependent Variables	
	Work Engagement	Organisational Commitment
Employee Care	0.439**	0.463**
Organisational Respect	0.372**	0.442**

** p ≤ 0.001.

engagement and organisational commitment (see Table 2). The strongest correlation was between employee care and organisational commitment ($r = 0.463, p = 0.000$). Using Guilford’s informal interpretation for the magnitude of r , this correlation can be interpreted as moderate (Tredoux and Durrheim, 2002). Organisational respect had the weakest correlation with work engagement ($r = 0.372, p = 0.000$). Again using Guilford’s guidelines, this correlation can be interpreted as low (Tredoux and Durrheim, 2002). In short, all four the correlations are weak given that they are below the threshold of 0.5.

6.4. Multiple regression: the influence of organisational respect and employee care on work engagement and organisational commitment

Both the independent variables (organisational respect and employee care) had a statistically significant influence on individuals’ levels of work engagement (see Table 3). Employee care explained 19.2% of the variance in work engagement, while organisational respect contributed 2.5% to the variance in the dependent variable. This regression model was statistically significant ($F = 26.669, p = 0.000$).

From Table 4 below, it is evident that organisational respect and employee care (independent variables) have a statistically significant influence on organisational commitment. 21.5% of the variance in organisational commitment was attributed to employee care, while 5.1% was explained by organisational respect. This regression model was also statistically significant ($F = 34.724, p = 0.000$).

It is interesting to note that organisational respect and employee care had a stronger statistically significant influence on organisational commitment (26.6%) than work engagement (21.7%). Also, employee care explained a much higher percentage of the variance in both work engagement (19.2%) and organisational commitment (21.5%) in comparison with organisational respect (2.5% in work engagement and 5.1% in organisational respect).

7. Discussion

The purpose of this research was to explore whether mineworkers’ perceptions of job resources (i.e., workplace practices that reflect organisational respect and care for the employee) have an influence on their work engagement and organisational commitment. The findings show that organisational respect had a statistically significant positive influence on both work engagement and organisational commitment. Employee care also had a statistically significant positive influence on work engagement and organisational commitment. Although these correlations were statistically significant, they could still be considered weak. It is therefore necessary to interpret them in the context of

Table 3
Significant predictors of work engagement (Stepwise Multiple Regression, n = 202).

Independent Variables	Standardised beta coefficients	t-value
Employee Care	0.336**	4.403
Organisational Respect	0.189*	2.477

* $p \leq 0.05$.

** $p \leq 0.001$.

Table 4
Significant predictors of organisational commitment (Stepwise Multiple Regression, n = 202).

Independent Variables	Standardised beta coefficients	t-value
Employee Care	0.317**	4.287
Organisational Respect	0.269**	3.645

** $p \leq 0.001$.

previous empirical results with a strong theoretical basis.

The literature shows that organisations can support employees through both formal organisational policies and practices and informal support (Bartlett, 2001; Hammer et al., 2009; Karatepe and Uludag, 2008; Mercurio, 2015). Employee care is regarded as an informal type of support as it relates to the relationship between the manager/supervisor and the employee, while organisational respect is reflected through the formal workplace practices of the organisation. The findings of the present study show that employee care had a stronger influence on both work engagement and organisational commitment than organisational respect. These results support the notion that received informal support, as reflected in the quality of the relationship between the manager/supervisor and employee, plays a stronger role in employees' affective attitudes than the formal support embedded in the organisation. This may be so because the manager/supervisor is the primary contact between the employee and the organisation. Employees usually negotiate with their managers/supervisors on a day-to-day basis for support, as they are responsible for the implementation of workplace practices (Levinson, 1965; Rofcanin et al., 2017).

To gain deeper insight into the role that organisational respect and employee care play in mineworkers' work engagement and organisational commitment, an understanding of the psychological processes that underlie the relationship between employees and their organisations is needed. Based on Emerson's (1976) social exchange theory, Liao (2011) explains how the relationship between the organisation or manager/supervisor and the employee is reciprocal in nature. For instance, perceived positive (or negative) behaviour from the organisation or manager/supervisor is reciprocated by positive (or negative) behaviour from the employee. Employees who experience goodwill, respect and care from their organisation or manager/supervisor (as reflected in its formal and informal workplace practices), will in return show their goodwill by means of increased work engagement and organisational commitment. In other words, according to the social exchange theory, employees weigh the potential risks and benefits of social relationships. When the risks outweigh the advantages, employees will terminate or (emotionally) abandon the relationship. The findings from the study support the theoretical notion on reciprocity, proposed by the social exchange theory, that social behaviour is the consequence of an exchange process (Gouldner, 1960; Coyle-Shapiro and Shore, 2007).

The findings of the present study also support previous empirical studies within the context of the mining industry. Two previous South African studies related the leadership style of the manager or supervisor to work engagement and organisational commitment, respectively. A study in a gold mine in the North West Province (Bezuidenhout and Schultz, 2013) showed that charismatic transformational leadership

(the ability to create a work climate that enables employees to achieve their objectives, paying individual attention to employees, and showing concern for their development) predicted work engagement. Another study by Mclaggan et al. (2013) at a coal mine in Phola in the Mpumalanga province showed that employees' reporting to supervisors who adopt a transformational leadership style, show an interest in their employees, make them feel important, and value their input, show more affective commitment towards their organisation. According to Mclaggan et al. (2013), such employees perceive themselves to be an important asset to the organisation and therefore, in turn, enhance their commitment to the organisation.

Other past studies related to work engagement in the mining environment found that perceived organisational support, such as effective communication, autonomy, role clarity, and supervisory and co-worker support, can enhance work engagement in the mining sector (Mphahlele et al., 2018; Palo and Rothmann, 2016; Rothmann and Joubert, 2007). Furthermore, a study among employees from two platinum mining companies in Rustenburg, North West province, South Africa, showed that job resources, such as supervisor and co-workers support, were associated with high work engagement (Hlapho, 2015).

A related study conducted in three large-scale gold mining companies in Ghana (Amponsah-Tawiah and Mensah, 2016) showed that employees' perceptions of the way the organisation manages occupational health and safety issues had a statistically significant influence on employees' affective commitment. Employees' emotional attachment and identification with the organisation is enhanced when they have a positive perception of the management of health and safety on the job. The findings of the present study also support previous empirical studies outside the mining environment (Alzyoud et al., 2015; Brunetto et al., 2014; Kehoe and Wright, 2013; Morrow, 2011; Park et al., 2014), indicating that employees experience higher levels of work engagement and feel more committed towards their organisations when they experience care and goodwill from their organisation and managers or supervisors.

8. Concluding comments

The findings of the present study show the importance of job resources that reflect respect and care for mineworkers in order to enhance their work engagement and affective organisational commitment. Mining companies can create job resources to help influence the negative effect of job demands on their employees' work engagement and affective organisational commitment. However, it is important to note that employees' perceptions of the available informal and formal organisational support, and their ability to access this support, override the objective indicators of support, as their perceptions influence their cognitive appraisals of the situation (Glazer, 2006). Employees' perceptions of their organisation's supportive workplace practices reflect a level of understanding of and responsiveness to employee concerns and help them cope more effectively with psychological or other job demands (Paterson et al., 2014). Therefore, it seems both formal and informal support may play an important role in increasing Platinum Belt mineworkers' work engagement and organisational commitment. It is thus proposed that they do not only invest in formal and informal workplace practices that reflect respect and care for their employees, which subsequently increase the positive affective attitudes of their employees. They should also expose supervisors and managers to the necessary training to provide care and assistance to the mineworkers when needed.

References

- Abrahamsson, L., Segerstedt, E., Nygren, M., Johansson, J., Johansson, B., Edman, I., Akerlund, A., 2014. Gender, Diversity and Work Conditions in Mining, Mining and Sustainable Development. Luleå University of Technology Press, Luleå, Sweden.
- Allen, D.G., Shanock, L.R., 2013. Perceived organizational support and embeddedness as

- key mechanisms connecting socialization tactics to commitment and turnover among new employees. *J. Organ. Behav.* 34 (3), 350–369.
- Allesandri, G., Consiglio, C., Luthans, F., Borgogni, 2018. Testing a dynamic model of the impact of psychological capital on work engagement and job performance. *Career Dev. Int.* 23 (1), 33–47.
- Alzyoud, A.A.Y., Othman, S.Z., Isa, M.F.M., 2015. Examining the role of job resources on work engagement in the academic setting. *Asian Soc. Sci.* 11 (3), 1911–2025.
- Amponsah-Tawiah, K., Mensah, J., 2016. Occupational health and safety and organizational commitment: evidence from the Ghanaian mining industry. *Saf. Health Work* 7, 225–230.
- Bakker, A.B., Demerouti, E., 2007. The job demands-resources model: state of the art. *J. Manag. Psychol.* 22 (3), 309–328.
- Bakker, A.B., Demerouti, E., 2008. Towards a model of work engagement. *Career Dev. Int.* 13 (3), 209–223.
- Bakker, A.B., Albrecht, S.L., Leiter, M.P., 2011. Key questions regarding work engagement. *Eur. J. Work. Organ. Psychol.* 20 (1), 4–28. <https://doi.org/10.1080/1359432x.2010.485352>.
- Bandula, P.M.K.U., Jayatilake, L.V.K., 2016. Impact of employee commitment on job performance: based on leasing companies in Sri Lanka. *Int. J. Arts Commerce* 5 (8), 8–22.
- Bartlett, K.R., 2001. The relationship between training and organizational commitment: a study in the health care field. *Hum. Resour. Dev. Q.* 12 (4), 335–352.
- Bezuidenhout, A., Buhlungu, S., 2015. Enclave Rustenburg: platinum mining and the post-apartheid social order. *Rev. Afr. Polit. Econ.* 42 (146), 526–544.
- Bezuidenhout, A., Schultz, C., 2013. Transformational leadership and employee engagement in the mining industry. *Manag. J. Contemp. Manag. Issues* 10 (1), 279–297.
- Björnsson, O., 2018. Carrying the Costs: Human Rights Impacts in Communities Affected by Platinum Mining in South Africa, and the Responsibilities of Companies Providing Equipment. *Swedwatch Report 89*, Alice Blondel. Available: http://www.benchmarkmarks.org.za/press/carrying_the_costs.pdf [Accessed 15 November 2019].
- Brunetto, Y., Shacklock, K., Teo, S., Farr-Wharton, R., 2014. The impact of management on the engagement and well-being of high emotional labour employees. *Int. J. Hum. Resour. Manag.* 25 (17), 2345–2363.
- Cairncross, E., Kisting, S., 2016. Platinum and gold mining in South Africa: the context of the Marikana Massacre. *New Solut. A J. Environ. Occup. Health Policy* 25 (4), 513–534.
- Capps, G., 2015. Labour in the time of platinum. *Rev. Afr. Polit. Econ.* 42 (146), 497–507.
- Casper, W.J., Martin, J.A., Buffardi, L.C., Erdwins, C.J., 2002. Work-family conflict, perceived organizational support, and organizational commitment among employed mothers. *J. Occup. Health Psychol.* 7 (2), 99–108.
- Casper, W.J., Harris, C., Taylor-Bianco, A., Wayne, J.H., 2011. Work-family conflict, perceived supervisor support and organizational commitment among Brazilian professionals. *J. Vocat. Behav.* 79 (3), 640–652.
- Chaskalson, R., 2016. The road to Marikana: transformations in South Africa's platinum industry, 1994–2012. *J. South. Afr. Stud.* 42 (5), 857–873.
- Cheche, S.G., Muathe, S.M.A., Maina, S.M., 2017. Employee engagement, organisational commitment and performance of selected state corporations in Kenya. *Eur. Sci. J.* 13 (31), 317–327.
- Christian, M.S., Garza, A.S., Slaughter, J.E., 2011. Work engagement: a quantitative review and test of its relationship with task and contextual performance. *Pers. Psychol.* 64 (1), 89–136.
- Coyle-Shapiro, J.A.-M., Shore, L.M., 2007. The employee-organization relationship: where do we go from here? *Hum. Resour. Manag. Rev.* 17 (2), 166–179.
- De Bruin, G.P., Henn, C.M., 2013. Dimensionality of the 9-item Utrecht Work Engagement Scale (UWES-9). *Psychol. Rep.* 112 (3), 788–799.
- Dollard, M.F., Bakker, A.B., 2010. Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement. *J. Occup. Psychol.* 83, 579–599.
- Duong, D., Tuckey, M.R., Hayward, R.M., Boyd, C.M., 2015. Work-family conflict: the importance of differentiating between different facets of job characteristics. *Work Stress* 29 (3), 230–245.
- Eisenberger, R., Huntington, R., Hutchison, S., Sowa, D., 1986. Perceived organizational support. *J. Appl. Psychol.* 71 (3), 500–507.
- Emerson, R.M., 1976. Social exchange theory. *Annu. Rev. Sociol.* 2, 335–362.
- Federation for a Sustainable Environment, 2018. The Impact of Mining on the South African Economy and Living Standards. Available: <http://fse.org.za/index.php/item/593-the-impact-of-mining-on-the-south-african-economy-and-living-standards> [Accessed 14 January 2020].
- Field, A., 2005. *Discovering Statistics Using SPSS*, 2nd edn. SAGE, Thousand Oaks, CA.
- Geldenhuys, M., Laba, K., Venter, C.M., 2014. Meaningful work, work engagement and organisational commitment. *SA J. Ind. Psychol.* 40. <https://doi.org/10.4102/sajip.v40i1.1098>.
- Genc, B., Jerome, J., 2014. Challenges in the South African platinum sector. In: Drebenstedt, C., Singhal, R. (Eds.), *Mine Planning and Equipment Selection*. Springer International, Switzerland, pp. 1361–1368.
- Glazer, S., 2006. Social support across cultures. *Int. J. Intercult. Relat.* 30 (5), 605–622.
- Gouldner, A., 1960. The norm of reciprocity: a preliminary statement. *Am. Sociol. Rev.* 25, 161–178. <https://doi.org/10.2307/2092623>.
- Gülbahar, B., 2017. The relationship between work engagement and organizational trust: a study of elementary school teachers in Turkey. *J. Educ. Train. Stud.* 5 (2), 149–159.
- Hair, J.F., Black, B., Babin, B., Anderson, R.E., Tatham, R.L., 2006. *Multivariate Data Analysis*, 6th edn. Prentice-Hall, Upper Saddle River, NJ.
- Hakanen, J.J., Schaufeli, W.B., 2012. Do burnout and work engagement predict depressive symptoms and life satisfaction? A three-wave seven-year prospective study. *J. Affect. Disord.* 141 (2–3), 415–424.
- Hakanen, J.J., Bakker, A.B., Demerouti, E., 2005. How dentists cope with their job demands and stay engaged: the moderating role of job resources. *Eur. J. Oral Sci.* 113, 479–487.
- Halbesleben, J.R., 2010. A meta-analysis of work engagement: relationships with burnout, demands, resources, and consequences. In: Bakker, A.B., Leiter, M.P. (Eds.), *Work Engagement: A Handbook of Essential Theory and Research*. Psychology Press, New York, pp. 102–117.
- Hammer, L.B., Kossek, N.L., Yragui, N.L., Bodner, T.E., Hanson, G.C., 2009. Development and validation of a multidimensional measure of family supportive supervisor behaviors. *J. Manag.* 35 (4), 837–856.
- Hlapho, T., 2015. *Key Drivers of Employee Engagement in the Large Platinum Mines in South Africa*. MBA Dissertation. University of Pretoria, Pretoria.
- Hoole, C., Bonneman, J., 2015. Work engagement and meaningful work across generational cohorts. *SA J. Hum. Resour. Manag.* 13 (1), 1–11. <https://doi.org/10.4102/sajhrm.v13i1.681>. [Accessed 22 April 2019].
- Kahn, W.A., 1990. Psychological conditions of personal engagement and disengagement at work. *Acad. Manag. J.* 33 (4), 692–724.
- Karatepe, O.M., Uludag, O., 2008. Supervisor support, work-family conflict, and satisfaction outcomes: an empirical study in the hotel industry. *J. Hum. Resour. Hosp. Tour.* 7 (2), 115–134.
- Kehoe, R.R., Wright, P.M., 2013. The impact of high-performance human resource practices on employees' attitudes and behaviors. *J. Manag.* 39 (2), 366–391.
- KPMG, 2019. *Risks and Opportunities for Mining – Outlook 2019*. Available: <https://assets.kpmg/content/dam/kpmg/xx/pdf/2019/02/global-mining-risk-survey-2019.pdf> [Accessed 26 July 2019].
- Levinson, H., 1965. Reciprocity: the relationship between man and organization. *Adm. Sci. Q.* 9, 370–390.
- Liao, P.-Y., 2011. Linking work-family conflict to job attitudes: the mediating role of social exchange relationships. *Int. J. Hum. Resour. Manag.* 22 (14), 2965–2980.
- Macey, W.H., Schneider, B., 2008. The meaning of employee engagement. *Ind. Organ. Psychol.* 1, 3–30. <https://doi.org/10.1111/j.1754-9434.2007.0002.x>.
- Mache, S., Vitzthum, K., Wanke, E., Gronenberg, D., Klapp, B., Danzer, G., 2014. Exploring the impact of resilience, self-efficacy, optimism and organizational resources on work engagement. *Work* 47 (4), 491–500.
- Marais, L., Denoon-Stevens, S., Cloete, J., Moskalenko, N., 2019. Mining towns and urban sprawl in South Africa. *Land Use Policy*. <https://doi.org/10.1016/j.landusepol.2019.04.014>.
- Markos, S., Sridevi, M.S., 2010. Employee engagement: the key to improving performance. *Int. J. Bus. Manag.* 5, 89–96.
- Masia, U., Pienaar, J., 2011. Unravelling safety compliance in the mining industry: examining the role of work stress, job insecurity, satisfaction and commitment as antecedents. *SA J. Ind. Psychol.* 37 (1). <https://doi.org/10.4102/sajip.v37i1.937>. Art. #937, 10 pages. [Accessed 12 June 2019].
- Mclaggan, E., Bezuidenhout, A., Botha, C.T., 2013. Leadership style and organisational commitment in the mining industry in Mpumalanga. *SA J. Hum. Resour. Manag.* 11 (1). <https://doi.org/10.4102/sajhrm.v11i1.483>. Art. #483, 9 pages.
- Mercurio, Z.A., 2015. Affective commitment as a core essence of organizational commitment: an integrative literature review. *Hum. Resour. Dev. Rev.* 14 (4), 389–414.
- Meyer, J.P., Allen, N.J., Smith, C.A., 1993. Commitment to organizations and occupations: extension and test of a three-component conceptualisation. *J. Appl. Psychol.* 78, 538–551.
- Meyer, J.P., Stanley, D.J., Herscovitch, L., Topo Inytsky, L., 2002. Affective, continuance, and normative commitment to the organization: a meta-analysis of antecedents, correlates, and consequences. *J. Vocat. Behav.* 61, 20–52.
- Moraka, N.V., Jansen van Rensburg, M., 2015. Transformation in the Southern African mining industry – looking beyond the employment equity scorecard. *The Southern African Institute of Mining and Metallurgy* 155, 669–678.
- Morrow, P.C., 2011. Managing organizational commitment: insights from longitudinal research. *J. Vocat. Behav.* 79, 18–35. <https://doi.org/10.1016/j.jvb.2010.12.008>.
- Mostert, K., Rathbone, A.D., 2001. Work characteristics, work-home interaction and engagement of employees in the mining industry. *Manag. Dyn. Knowl. Econ.* 16 (2), 36–52.
- Mphahlele, P., Els, C., de Beer, L.T., Mostert, K., 2018. Investigating strengths and deficits to increase work engagement: a longitudinal study in the mining industry. *SA J. Hum. Resour. Manag.* 16, a900. <https://doi.org/10.4102/sajhrm.v16i0.900>. [Accessed 14 July 2019].
- Neingo, P.N., Tholana, T., 2016. Trends in productivity in the South African gold mining industry. *J. Southern-Afr. Inst. Metall.* 116, 283–290.
- Othman, N., Nasurdin, A.M., 2012. Social support and work engagement: a study of Malaysian nurses. *J. Nurs. Manag.* 21 (8), 1083–1090. <https://doi.org/10.1111/j.1365-2834.2012.01448.x>.
- Palo, J., Rothmann, S., 2016. Work engagement in the mining industry in South Africa: the role of tasks and relationships. *J. Psychol. Afr.* 26 (3), 221–229. <https://doi.org/10.1080/14330237.2016.1185901>.
- Parent, J.D., Lovelace, K.J., 2015. The impact of employee engagement and a positive organizational culture on an individual's ability to adapt to organization change. *Eastern Academy of Management Proceedings: Organization Behavior and Theory Track* 1–20. Available: http://scholarworks.merrimack.edu/mgt_facpub/10 [Accessed 12 July 2019].
- Park, H.Y., Christie, R.L., Sype, G., 2014. Organizational Commitment and Turnover Intention in Union and Non-union Firms. *SAGE Open* <https://doi.org/10.1177/2158244013518928>. 4.
- Parker, G.B., Hyett, M.P., 2011. Measurement of well-being in the workplace: the development of the work well-being questionnaire. *J. Nerv. Ment. Dis.* 199 (6), 394–397.
- Paterson, T.A., Luthans, F., Jeung, W., 2014. Thriving at work: impact of psychological capital and supervisor support. *J. Organ. Behav.* 35, 434–446.

- Paul, P.S., Maiti, J., 2007. The role of behavioral factors on safety management in underground mines. *Saf. Sci.* 45 (4), 449–471.
- PWC, 2017. SA Mine 2017: Highlighting Trends in the South African Mining Industry, 9th edition. . Available: <https://www.pwc.co.za/en/assets/pdf/2017-sa-mine.pdf> [Accessed 25 November 2019].
- PWC, 2019. SA Mine 2019: in Transition, 11th edition. . Available: <https://www.pwc.co.za/en/publications/sa-mine.html> [Accessed 26 November 2019].
- Rajak, D., 2016. Hope and betrayal on the Platinum Belt: responsibility, violence and corporate power in South Africa. *J. South. Afr. Stud.* 42 (5), 929–946.
- Rashid, M.Z.A., Sambasivan, M., Johari, J., 2003. The influence of corporate culture and organisational commitment on performance. *J. Manag. Dev.* 22 (8), 708–728.
- Rhoades, L., Eisenberger, R., 2002. Perceived organizational support: a review of the literature. *J. Appl. Psychol.* 87 (4), 698–714.
- Rofcanin, Y., Las Heras, M., Bakker, A.B., 2017. Family supportive supervisor behaviors and organizational culture: effects on work engagement and performance. *J. Occup. Health Psychol.* 22 (2), 207–217. <https://doi.org/10.1037/ocp0000036>. (Online). [Accessed 15 January 2019].
- Rothmann, S., Joubert, J.H.M., 2007. Job demands, job resources, burnout and work engagement of managers at a platinum mine in the North West Province. *Saudi J. Bus. Manag. Stud.* 38 (3), 49–61.
- SACN, 2017. Spatial Transformation: Are Intermediate Cities Different? South African Cities Network: Johannesburg. Available: <http://www.sacities.net/wp-content/uploads/2017/10/SACN-Secondary-Cities-2017.pdf> [Accessed 29 July 2019]. .
- Schaufeli, W.B., 2013. What is engagement? In: Truss, C., Alfes, K., Delbridge, R., Shantz, A., Soane, E. (Eds.), *Employee Engagement in Theory and Practice*. Routledge, London.
- Schaufeli, W.B., Bakker, A.B., 2004. Job demands, job resources and their relationship with burnout and engagement: a multi-sample study. *J. Organ. Behav.* 25, 293–315.
- Schaufeli, W.B., Bakker, A.B., 2010. Defining and measuring work engagement: bringing clarity to the concept. In: Bakker, A.B., Leiter, M.P. (Eds.), *Work Engagement: A Handbook of Essential Theory and Research*. Psychology Press, New York.
- Schaufeli, W., Salanova, M., Gonzalez-Roma, V., Bakker, A., 2002. The measurement of engagement and burnout: a two sample confirmatory factor analytic approach. *J. Happiness Stud.* 3, 71–92. <https://doi.org/10.1023/A:1015630930326>.
- Schaufeli, W.B., Bakker, A.B., Salanova, M., 2006. The measurement of work engagement with a brief questionnaire: a cross-national study. *Educ. Pers. Meas.* 66 (4), 701–716.
- Singh, V., 2019. The impact of job engagement and organizational commitment on organizational performance: evidence from India. A Volume in the Advances in Human Resources Management and Organizational Development (AHRMOD) Book Series. IGI Global, Hershey, PA, pp. 218–235.
- Singh, S.P., Karki, J., 2015. The impact of job engagement and organizational commitment on organisational performance. *Int. J. Bus. Manag.* 3 (4), 49–55.
- Soane, E.C., 2013. Leadership and employee engagement. In: Truss, C., Alfes, K., Delbridge, R., Shantz, A., Soane, E.C. (Eds.), *Employee Engagement in Theory and Practice*. Routledge, London.
- Sonnentag, S., 2017. A task-level perspective on work engagement: a new approach that helps to differentiate the concepts of engagement and burnout. *Burn. Res.* 5, 2–20.
- Sorenson, S., 2013. How employee engagement drives growth. *Bus. J.* (June 20). Available: www.gallup.com/businessjournal/163130/employee-engagement-drives-growth.aspx [Accessed 22 June 2019].
- Taris, T.W., Ybema, J.F., van Beek, I., 2017. Burnout and engagement: Identical twins or just close relatives? *Burn. Res.* 5, 3–11.
- Tredoux, C., Durrheim, K. (Eds.), 2002. Numbers, Hypotheses, and Conclusions: A Course in Statistics for the Social Sciences. UCT Press, Lansdowne, Cape Town.
- Vokić, N.P., Hernaus, T., 2015. The Triad of Job Satisfaction, Work Engagement and Employee Loyalty: the Interplay Among the Concepts. EFZG Working Papers Series 1507, Faculty of Economics and Business, University of Zagreb, Croatia.
- Waddell, W.J., 2015. Resilience and Engagement in Mental Health Nurses. Doctoral Dissertation. Capella University., Minneapolis.
- Youssef, C.M., Luthans, F., 2007. Positive organisational behaviour in the workplace: the impact of hope, optimism and resilience. *J. Manag.* 33 (5), 774–800. <https://doi.org/10.1177/0149206307305562>.