



Rewards system and employee motivation in the South African Military Health Service



Authors:

Paul Mabunda¹ 
Mokgata A. Matjie¹ 

Affiliations:

¹Department of Industrial and Organisational Psychology, College of Economics and Management Sciences (CEMS), University of South Africa, Pretoria, South Africa

Corresponding author:

Mokgata Matjie,
mokgata.matjie@ul.ac.za

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Orientation: The study on reward systems (RS) and their effects and prediction of employee motivation (EM) in the South African Military Health Service (SAMHS) becomes crucial for research in performance management.

Research purpose: The purpose of the study was to investigate the predictive relationship between the rewards system and EM in the SAMHS, to assess the effectiveness of the rewards system.

Motivation for the study: Reward systems are implemented to motivate employees. When implemented appropriately, RS can enhance and positively predict EM.

Research design, approach, and method: Participants were sampled ($N = 300$) using simple random and convenience sampling techniques. Cronbach's alpha was computed to assess internal consistency of the scale items, Pearson's correlations to evaluate variable relationships between RS and EM, and hierarchical regression analysis was used to determine the effects of intrinsic and extrinsic rewards (ER) on EM.

Main findings: The results show that RS is related to EM. Furthermore, regression analysis results show that while both intrinsic rewards (IR) and ER are important, only IR significantly predict EM.

Practical/managerial implication: RS positively relates to EM, and that should be maintained. IR serves as a buffer when ER fails to fully motivate employees. SAMHS and performance management or rewards practitioners should use these results to promote RS for EM.

Contribution/value-add: The study shows that intrinsic and ERs increase employee motivation, and IR predicts EM at SAMHS.

Keywords: rewards system; motivation; intrinsic rewards; extrinsic rewards; employee's motivation; South African Military Health Service; SAMHS.

Introduction

The discourse surrounding employee motivation often invokes the dichotomy established by McGregor's Theory X, which posits that individuals possess an inherent tendency towards laziness and require external motivation to fulfil their responsibilities (Bakoula & Galanakis 2022). This perspective is further entrenched by the prevalent stereotype of public sector employees as lethargic and inefficient (Dinhof et al. 2023), a belief that informs our approach to workforce dynamics at the South African Military Health Service (SAMHS). Whether one aligns with this characterisation or not, empirical evidence substantiates the assertion that a lack of motivation correlates with diminished productivity and engagement, transcending the boundaries of both private and public sector organisations (Larkin 2017; Panait 2020). To counteract these motivational deficits, it is incumbent upon employers to implement reward systems (RS) that serve as strategic mechanisms for enhancing employee motivation (EM) (Alex, 2024; Anderson & Gilin 2024; Deci, Koestner & Ryan 1999; Qing & Teo 2024; Smitha & Suthra 2023). The motivation elicited by these systems can be categorised into intrinsic rewards (IR) and extrinsic rewards (ER), with effectiveness varying according to employee profiles and the perceived value of rewards (Anderson & Gilin 2024; Kuswati 2020; Mbukwana & Ayandibu 2023; Oschman & Matjie 2025). Intrinsic rewards are grounded in internal motivation, engendering feelings of pride, purpose and personal fulfilment derived from the work itself (Ibitomi et al. 2022; Kant & Atula 2024; Manzoor, Wei & Asif 2021). Conversely, ERs manifest as tangible motivators – often of a monetary nature – that are specifically designed to incentivise preferred behaviours or enhance performance. These may include financial incentives (such as salary increases, bonuses and profit-sharing), non-financial acknowledgements (such as

promotions and public recognition), and other benefits such as additional vacation time or opportunities for professional development (Aldabbas et al. 2025; Chantal, Manyange & Asuman 2022). Collectively, these extrinsic factors may effectively galvanise EM, contingent upon the individual characteristics of employees (Gist-Mackey, Piercy & Bates 2024).

Furthermore, EM emerges as a pivotal psychological construct that organisations must prioritise to bolster not only motivation but also overall performance (Deci et al. 1999; Kuswati 2020; Mbukwana & Ayandibu 2023; Sajjad, Ghazanfar & Ramzan 2013; Qing & Teo 2024). Nonetheless, both public and private entities continue to grapple with suboptimal productivity levels (Adinew 2024; Chaudhary et al. 2024). Ultimately, irrespective of whether the rewards are intrinsic or extrinsic, or the motivation is internal or external, it is imperative that employees receive adequate motivation to fulfil their responsibilities effectively and advance the overarching objectives of their respective organisations (Deci et al. 1999; Kuswati 2020; Mbukwana & Ayandibu 2023).

Literature review

South African military health services context

The SAMHSs, an essential component of the South African National Defence Force (SANDF), is responsible for providing critical health services to both active and veteran military personnel. To successfully execute this mandate, the SAMHS must cultivate a highly motivated workforce. However, this ideal is frequently impeded by various factors, including unhappy and disengaged staff (Alex, 2024; Anderson & Gilin 2024; Deci et al. 1999). The introduction of a rewards system within the SAMHS seeks to enhance performance through effective incentivisation. Nonetheless, existing literature highlights significant challenges surrounding the implementation of RSs in military contexts (Kaupa & Olusegun Atiku 2020; Modell 2005; Nkoana & Matjie 2024; Oschman & Matjie 2025). In the specific case of the SAMHS, the entrenched military culture may hinder the realisation of promised ERs, thereby detracting from the intended effectiveness of such systems (Oschman & Matjie 2025; Thomas & Jansen 1996). Conversely, IRs are likely to serve as motivational mechanisms resonating within the military framework, where values of respect and honour transcend rank and position. The military uses the ranking system as an intrinsic motivation strategy linked not only to rewards, personal accomplishment but also career progression (Makhathini & Van Dyk 2018; Sharma 2014). The distinct work environment of the military, steeped in cultural tenets, complicates employees' ability to 'demand' rewards for their performance. This complexity makes it challenging to assess whether such rewards genuinely contribute to their motivation (Oschman & Matjie 2025). This intricate dynamic implies that evaluating motivational strategies in military settings necessitates a nuanced understanding of both intrinsic and extrinsic factors. As such, it proves difficult for the SAMHS to assertively demand

or expect rewards for the performances of their personnel, rendering this undertaking both complex and challenging to comprehend.

Theoretical framework

Employee motivation is fundamentally anchored in several key motivation theories, including Maslow's Hierarchy of Needs (Maslow 1943) and Herzberg's Two-Factor Theory (Herzberg 1966). In parallel, RSs are drawn from the Expectancy Theory (Vroom 1964) and Goal Setting Theory (Locke 1968). Employees are likely to demonstrate high levels of performance when their efforts contribute to fulfilling essential financial needs, as articulated by Maslow (1943). Herzberg's theory posits that both hygiene factors (e.g. salary) and motivator factors (e.g. recognition) are crucial in fostering optimal performance as rewards (Herzberg 1966). For rewards to achieve their motivational potential, whether intrinsically or extrinsically, they must be communicated during the initial phases of contracting or goal setting, establishing expected performance standards and corresponding rewards. Without a well-defined set of goals, any RS is rendered ineffective, potentially perceived as inequitable and unjust, as it creates a lack of benchmarks for assessing performance standards and resulting rewards (Locke 1968). Moreover, promises made during the goal-setting process must be honoured without bias or deviation if the RS is to effectively motivate employees and enhance their performance (Vroom 1964). A RS that recognises performance at a specific threshold encourages employees to meet or exceed that benchmark (Siraj & Hågen 2023). Collectively, these theoretical frameworks offer a robust basis for comprehending motivational dynamics at SAMHS, where an effective RS can significantly drive employee efforts towards surpassing performance expectations.

Rewards system

A rewards system is a structured framework that provides incentives to individuals or groups for achieving specific goals or demonstrating desired behaviours (Anderson & Gilin 2024). When effectively implemented, such a system can significantly enhance motivation, employee engagement and job satisfaction (Kuswati 2020; Mbukwana & Ayandibu 2023; Oschman & Matjie 2025). It typically involves establishing clear goals, monitoring progress and distributing rewards based on performance (Deci et al. 1999; Qing & Teo 2024). By recognising achievements, organisations can foster a culture of motivation and success (Anderson & Gilin 2024). Rewards can be categorised as monetary (extrinsic) or non-monetary (intrinsic) (Anderson & Gilin 2024). Monetary rewards, such as bonuses and salary increases, provide immediate benefits that drive performance, while non-monetary rewards, such as recognition and professional development opportunities, can also significantly motivate employees by tapping into their intrinsic motivations (Anderson & Gilin 2024). One of the key intrinsic factors motivating employees, particularly professionals in the healthcare sector, was found to be job

security as a career anchor (Gallow, Nel & Williams 2020; Gallow, Rena & Kharub 2025). Moreover, in the health sector, to motivate non-professional staff, job characteristics, job satisfaction and career anchors were found to be instrumental (Gallow et al. 2020).

In a competitive business environment, effective RSs are vital for motivating employees (Nkoana & Matjie 2024). Organisations, especially the military, should develop tailored recognition strategies that align with their unique culture instead of merely imitating practices from other entities (Madhani 2020; Oschman & Matjie 2025). Understanding diverse employee needs and preferences is crucial for the success of these systems (Madhani 2020), particularly in contexts such as the military. A well-managed rewards system positively impacts employee attraction, retention and motivation (Madhani 2020). Satisfied and committed employees are more likely to provide better service and contribute to organisational profitability. In addition, employees who are adequately rewarded tend to exert greater effort towards achieving targets (Jeni, Mutsuddi & Das 2020). In contrast, inadequate motivation and RSs can harm morale and lead to high turnover of employees (Gallow et al. 2025; Hammond & Waltemeyer 2021). This study aims to explore the rewards system's role in motivating employees and enhancing job performance within the military context. The RS at the SAMHS aims to enhance employee performance by motivating staff. By offering incentives and recognition, the system fosters a culture where employees feel valued and empowered, ultimately driving both individual excellence and organisational success.

Employee motivation

Employee motivation is a critical determinant of organisational success, reflecting the degree of commitment, drive and creativity that employees bring to their roles daily (Herzberg 1966; Locke 1968; Maslow 1943; McGregor 1960; Vroom 1964; Wardiansyah, Indrawati & Kurniawati 2024). The implications of EM extend to multiple facets of the organisation, influencing more efforts, increased productivity and overall morale (Forson et al. 2021; Kovach 1987; Maduka & Okafor 2014), with motivated employees often serving as role models for their peers (Wardiansyah et al. 2024). In contrast, employees lacking motivation tend to fulfil only the minimum requirements of their roles and may actively seek opportunities elsewhere (Gandung 2024). Other consequences of lack of motivation are slow morale, poor performance, engagement and commitment, high turnover intentions, and presenteeism, among others, persist (Cwibi & Mxunyelwa 2024; Gallow et al. 2025; Sekgobela, Mokoena & Shipalana 2024; Sin 2022). According to Sajjad et al. (2013), EM encompasses the underlying reasons that prompt individuals to exhibit specific behaviours within the workplace, and when the reasons are unfavourable, the organisation suffers.

Rewards and employees' motivation

An effective employee rewards system should integrate both intrinsic and ERs to maintain EM throughout their

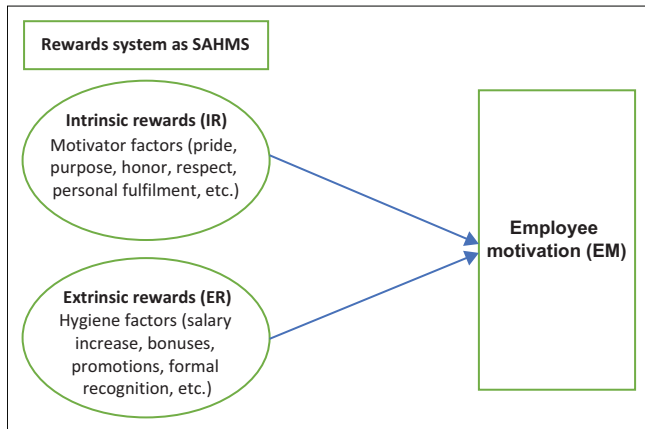
tenure. The decline in available rewards might lead to diminished motivation, as observed by multiple studies (Kassahun 2019; Noorzazem, Sabri & Nazir 2021; Vanithamani & Kayalvizhi 2023). Various researchers (Qing & Teo 2024; Vanithamani & Kayalvizhi 2023) have highlighted a substantial positive correlation between both forms of rewards and EM. Furthermore, Alex (2024) explored this relationship in Kampala, Kenya, revealing a positive and statistically significant correlation between the rewards system and EM. Kassahun (2019) conducted a study in one- and two-star-rated hotels in Ethiopia's Amhara region, confirming a favourable and significant correlation between the rewards system and employee work motivation.

It is generally accepted that both intrinsic and extrinsic factors significantly influence or predict EM (Kassahun 2019); however, ERs have been found to fail to consistently predict EM or performance (Kuvaas, Buch & Dysvik 2020; Ryan & Deci 2008). Prior research indicates that ERs such as promotions, bonuses and recognition have been traditionally utilised to elucidate EM and workplace dynamics (Alex 2024; Deci et al. 1999; Kuswati 2020; Mbukwana & Ayandibu 2023; Modell 2005; Nkoana & Matjie 2024; Oschman & Matjie 2025; Qing & Teo 2024; Sajjad et al. 2013). The non-financial incentives or IRs play a vital role in a comprehensive motivational strategy, offering lasting and intangible benefits that cannot be economically implemented repeatedly (Qing & Teo 2024). They contribute to an employee's motivation by instilling a sense of value for their contributions within the organisation (Alex 2024). Both intrinsic and ERs are pivotal for fostering overall EM within any organisation, including the SAMHS. While IRs, such as honour and respect from peers, may provide some initial effectiveness, their long-term impact can be limited because of personal and social needs that may be better satisfied through ERs such as bonuses and incentives (Gallow et al. 2025; Smitha & Suthra 2023). Based on the aforesaid literature, the study aimed to answer the following research questions: (1) *What is the relationship between the reward system (intrinsic and extrinsic rewards) on employee motivation at SAMHS?* (2) *What is the impact of both intrinsic and extrinsic rewards on employee motivation within the SAMHS?*

The conceptual framework

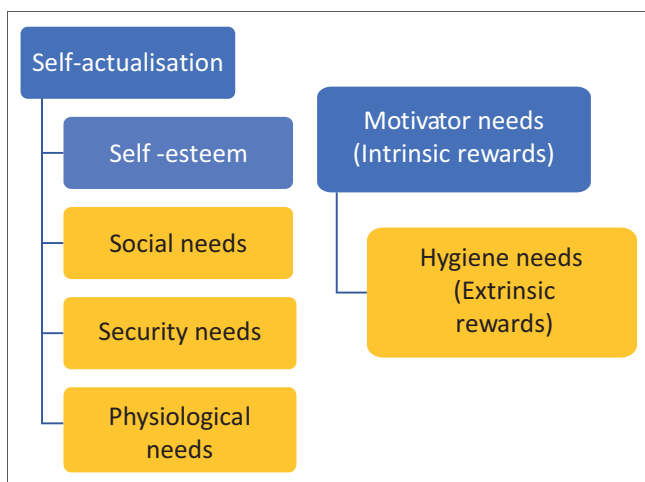
The comprehensive conceptual framework for the study is illustrated in Figure 1. This framework is grounded in the diverse motivation theories previously discussed, integrating key concepts to provide a cohesive understanding of the underlying motivations influencing the research context.

The conceptual framework guiding this study suggests that both IRs and ERs are derived from RSs. According to Herzberg's theory (1968), there are two types of rewards: hygiene factors (extrinsic) and motivator factors (intrinsic). These factors influence EM in different ways, which is why the researcher included both to examine their effects on EM



SAMHS, South African Military Health Service.

FIGURE 1: The study's conceptual framework.



Source: Adapted from Câmara, P., 2016, *Reward systems and the strategic management of human resources*, 4th edn., Publicações Dom Quixote, Lisbon, p. 108

FIGURE 2: Articulation of Maslow's hierarchy of needs and Herzberg's two-factor theories on motivation.

within the SAMHS. Hygiene factors encompass elements such as salary increase, bonuses, promotions and formal recognition. In contrast, motivator factors include aspects such as pride, purpose, honour, respect and personal fulfilment. Intrinsic factors are linked to Maslow's needs for self-actualisation and self-esteem, whereas ERs relate to social, security and physiological needs, as further illustrated in Figure 2 (Câmara 2016; Maslow 1943).

The relationship between RSs and EM has been extensively examined in scholarly literature, particularly through the lenses of Maslow's (1954) hierarchy of needs and Lawler's intrinsic-ER dichotomy. As Câmara (2016) argues, IRs, those inherently linked to the nature of the work, are pivotal in fostering EM. These rewards not only cultivate a sense of identification and commitment to the organisation but also imbue the work with meaning and significance. This intrinsic motivation is crucial for establishing sustainable and mutually beneficial relationships between employees and organisations, as opposed to ERs, which may offer only temporary incentives. Moreover, as noticed by Carapeto and Fonseca (2006), employees often place a higher value

on informal IRs compared to formal RSs, suggesting that organisations should prioritise these intrinsic elements within their reward frameworks. This is particularly important as IRs are less likely to be replicated by competing organisations, thus offering a unique competitive advantage (Institute for Employment Studies [IES] 2004).

Current research seeks to explore the impact of RSs, both intrinsic and extrinsic, on EM within the SAMHS. Given the unique operational context of the SAMHS, it remains to be seen whether insights from existing studies are applicable and can effectively inform practices in this specific environment. This investigation aims to deepen understanding of the dynamics at play in SAMHS and contribute to the broader discourse on motivation within organisational frameworks.

Research methods and design

This positivist study employed a quantitative, descriptive and cross-sectional survey design.

The researcher received written permission to conduct the study from the Surgeon General of the SAMHS. Thereafter, ethical clearance was obtained from the Ethics Committee of the Department of Industrial and Organisational Psychology at the University of South Africa. The researcher scheduled an appointment with the officer commanding (OC) of each unit where the study took place. The researcher met with the OC and participants to explain the study's purpose and process. After the participants had agreed to participate in the study, the researcher personally distributed the information sheet, the informed consent form for respondents to sign, and the actual research questionnaire. A simple random sampling technique and convenience sampling were used to identify participants for data collection from the population of 10 037 within the SAMHS. A total of 300 participants were sampled from the Gauteng and Mpumalanga provinces, with 298 questionnaires returned and duly completed. Participants were chosen based on at least 1 year of full-time service at the SAMHS. A sample size of 300 is commonly suggested to achieve a 95% confidence level and a 5% margin of error when estimating a population proportion of 50% (Burton et al. 2006). The questionnaires were personally handed over to the 300 sampled participants. A total of 298 participants completed the questionnaire, resulting in a notable response rate of 99%. The sample (n) comprised 168 (56.38%) women and 130 (43.6%) men. The majority of the respondents were between the ages of 41 and 50 (38.9%), followed by the respondents between the ages of 31 and 40 (34.6%). The least-represented age group was between 21 and 30 (7.7%). In terms of years of service, the majority of respondents were 20 years and above (34.2%), followed by those between 16 and 20 years (33.6%). Those with 1–5 years of service were least represented (1.3%). In terms of military rank, the majority of the sample came from the major to colonel rank (29.8%), followed by candidate officer to captain rank (25.8%), and civilians were least represented (7%).

Measuring instruments

The Rewards System Questionnaire (RSQ), developed by Amaeshi (2019), served as a crucial instrument in assessing the effectiveness of the organisation's rewards system. The RSQ is a self-report instrument designed to gauge perceptions of the rewards system's fairness, transparency and alignment with organisational goals. Amaeshi (2019) reported high internal consistency for the instrument, with a Cronbach's alpha coefficient of 0.92, suggesting excellent reliability. Furthermore, a high correlation coefficient of 0.85 was documented, indicating robust test-retest reliability as well. To evaluate EM, we used the Multidimensional Work Motivation Scale (MWMS), developed by Gagné et al. (2015), to assess work motivation grounded in self-determination theory (SDT). The MWMS has undergone extensive validation studies in multiple languages and countries, displaying satisfactory internal consistency with Cronbach's alpha values ranging from 0.70 to 0.90, indicative of its reliability and consistency in measuring work motivation. Through these instruments, the researcher aimed to provide a comprehensive analysis of factors contributing to motivation and performance within the SAMHS.

Data analysis

The Statistical Package for Social Sciences (SPSS) Version 28 for data analysis. Firstly, descriptive statistics were calculated for IR, ER and EM, with IR ($M = 3.68$; standard deviation [SD] = 0.56), ER ($M = 3.10$; SD = 1.80), and EM ($M = 3.42$; SD = 0.47), see Table 1. This was followed by reliability analysis (internal consistency of the items), whereby IR ($\alpha = 0.71$), ER ($\alpha = 0.88$) and EM ($\alpha = 0.83$), as shown in Table 2. The researchers calculated the correlations (r) to examine the relationship between rewards, EM and job performance and to comprehend the strength and direction of the relationship between the variables, with the following results in Table 3, IRs and employees' motivation ($r = 0.36^{***}$, $p < 0.001$), ERs and employees' motivation ($r = 0.16^{**}$, $p < 0.05$). Lastly, the researcher conducted multiple regression analysis to investigate the predictive relationships between the dependent variable (EM) and the independent variables (IR and ER), with the following results between EM and IR ($\beta = 0.449$, $p < 0.001$), and EM and ER ($\beta = -0.164$, $p < 0.006$).

TABLE 1: Descriptive statistics of variables in the study.

Variable	Mean	SD	Minimum	Maximum
Intrinsic rewards	3.68	0.56	1.67	5.00
Extrinsic rewards	3.10	1.80	0.64	3.10
Employees' motivation	3.43	0.47	1.67	4.44

SD, standard deviation.

TABLE 2: Reliability analysis (internal consistency).

Serial number	Dimensions	Number of items	Cronbach's alpha
1	Intrinsic rewards	09	0.71
2	Extrinsic rewards	15	0.88
3	Employee motivation	18	0.83

Ethical considerations

Ethical clearance to conduct this study was obtained from the University of South College of Human Sciences Research Ethics Review Committee (No. 56892063_CREC_CHS_2024). Before that, the researchers applied for and were granted permission to conduct the study at SAMHS. After the ethical approval, the researcher approached and informed the potential participants about the study. Those who responded positively were given an information sheet explaining their rights (confidentiality, anonymity, voluntary participation, to withdraw, informed consent, respect), and they signed the informed consent before the questionnaires were handed to them.

Results

Descriptive statistics

A descriptive analysis is a statistical technique that illustrates the mean or average responses obtained for each under-observation variable. This section shows the rewards system (intrinsic and extrinsic), employees' motivation, and employees' job performance variables' mean, standard deviation, lowest and maximum values. It summarises data trends and variability.

Intrinsic rewards (IR) has a mean ($M = 3.68$), indicating relatively high on a typical 1–5 Likert scale, indicating employees generally perceive good IRs (e.g. sense of achievement, personal growth). The SD = 0.56 indicates low variability, but most respondents rate IRs positively. Extrinsic rewards have a mean ($M = 3.10$), indicating a moderate level, thus suggesting a neutral to slightly positive view of ERs (e.g. salary, bonuses). The standard deviation (SD = 1.80) shows a very high variability, indicating responses are widely spread, further suggesting a skewed distribution with many lower scores on ER by the participants. Lastly, EM has a mean of ($M = 3.43$), indicating a moderately high mean and generally motivated employees at the SAMHS. The standard deviation (SD = 0.47) showed that most responses are near the mean, confirming the motivation of employees in general.

Reliability analysis

Reliability informs the researcher about the level or degree of internal consistency between the items in the variables. Table 2 indicates the study variables along with their

TABLE 3: Pearson's correlation.

Variable	1	2	3	4	5	6
1. Employee motivation	-	-	-	-	-	-
2. Intrinsic rewards	0.36***	-	-	-	-	-
3. Extrinsic rewards	0.16**	0.72***	-	-	-	-
4. Gender	0.05	0.04	-0.16**	-	-	-
5. Age group	0.02	0.04	0.10	-0.12*	-	-
6. Military rank	0.06	0.08	0.08	0.02	0.39***	-
7. Years in the SAMHS	0.11	0.07	0.05	-0.03	0.74***	0.30***

Note: Gender: 0 = Male, 1 = Female.

SAMHS, South African Military Health Service.

*, $p < 0.05$; **, $p < 0.01$; ***, $p < 0.001$.

respective instrument items and the Cronbach's alpha value. The RS (intrinsic and extrinsic) is an independent variable, and EM and employees' job performance are dependent variables.

The Cronbach's alpha of all the instruments adopted in this study suggests that they have adequate to excellent internal consistency reliability (> 0.60). The scales' satisfactory to excellent internal consistency reliability indicates that research studies can use the questionnaires with confidence.

Pearson's correlation coefficients

The purpose of this study was to examine the role of the rewards system on employees' motivation in the SAMHS and answer the questions: *What is the relationship between the reward system (intrinsic and extrinsic rewards) on employee motivation at SAMHS?* Pearson's correlation analysis was conducted to measure the strength and direction of the relationship between the rewards system, employees' motivation and job performance, and to assess the correlations between these variables. Pearson's correlations allow the researcher to determine whether the observed correlations between the variables are statistically significant, showing that the relationships are not likely to happen by chance. Table 3 displays the Pearson's correlation coefficients for the variables in the study.

Findings revealed a positive relationship between both IRs and employees' motivation ($r = 0.36^{***}$, $p < 0.001$), and ERs and employees' motivation in the SAMHS ($r = 0.16^{**}$, $p < 0.05$).

Multiple regression analysis

As explained above, only EM was measured to check if it can be predicted (not influenced) by rewards. Multiple regression analysis was carried out to examine the predictive

relationships between the RS and employees' motivation. The results of the regression analysis provide insights into the extent to which the rewards system predicts employees' job performance.

The findings for the EM (dependent variable) and IR (independent variable) are as follows: IR ($b = +0.449$; $\beta = 0.513$; $p < 0.001$), showing that when there is an increase in IRs, motivation increases, indicating a strong positive influence, the strongest predictor in the model, at a high statistically significant level. Extrinsic rewards ($b = -0.164$; $\beta = -0.216$; $p = 0.006$), showing that for each unit increase in ERs, motivation decreases by 0.164 (unexpected), causing a moderate negative relationship at a statistically significant level.

Model fit

The results of the regression analysis indicate a statistically significant model fit, with $F(2, 296) = 25.897$ and $p < 0.001$. This suggests that the model as a whole provides a meaningful explanation of the data. Furthermore, the Adjusted R^2 value of 0.144 signifies that approximately 14.4% of the variance in EM can be accounted for by intrinsic and ERs. This finding reflects a modest effect size, which is commonly observed in social science research. The remaining 85.65% might be because of other factors, such as biographical factors and the military culture. While 14.4% might seem small, in social science research, this is actually quite common. Human behaviour and motivation are influenced by many variables, so it is normal for individual predictors (such as rewards) to explain only a modest portion of the variance.

As shown on the regression plots (Figure 3), it answers the questions: *What is the impact of both intrinsic and extrinsic*

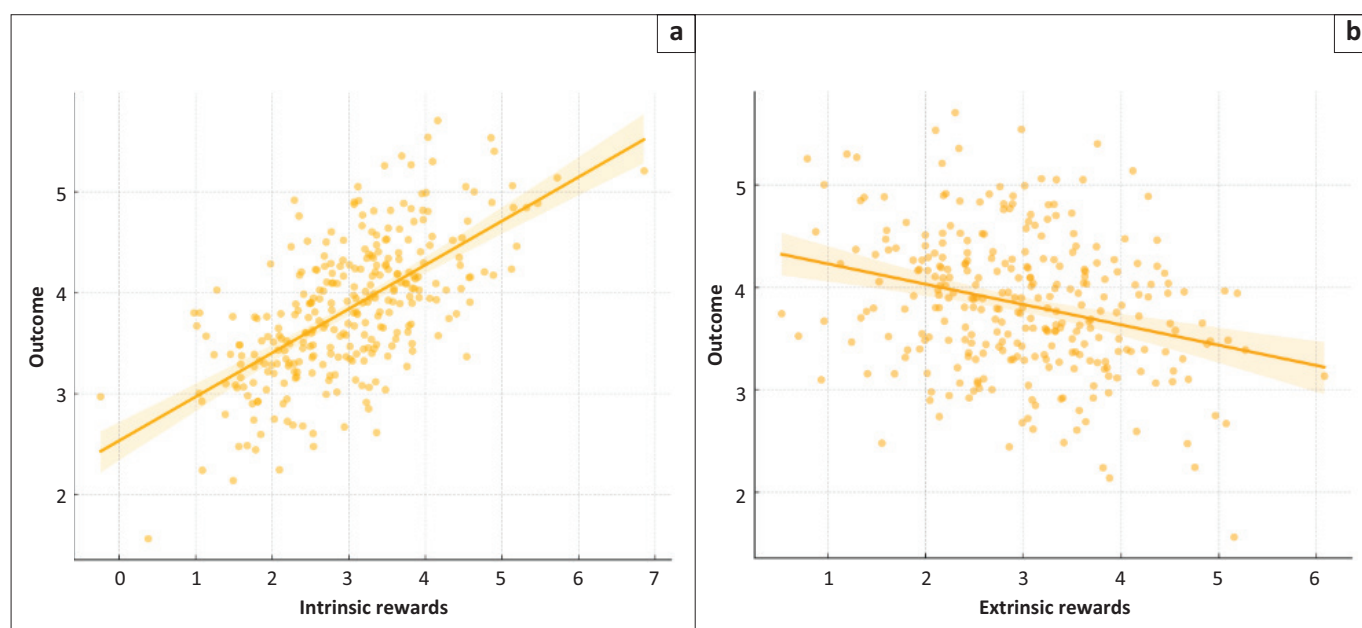


FIGURE 3: Regression plots for intrinsic rewards and extrinsic rewards independent variable (IV) and employee motivation dependent variable (DV): (a) Effect of intrinsic rewards on outcome, (b) Effect of extrinsic rewards on outcome.

TABLE 4: Multiple regression with employee motivation as the dependent variable.

Variable	Estimate	SE	Beta	t-statistics	p-value
Intercept	2.941	0.175	-	16.803	< 0.001
Intrinsic rewards	0.449	0.068	0.513	6.596	< 0.001
Extrinsic rewards	-0.164	0.059	-0.216	-2.777	0.006

rewards on employee motivation within the SAMHS? It is clear that when IR increases, EM also increases, showing a strong positive relationship, while ER versus EM shows a weak negative relationship because, on the right-side figure, when ER increases, EM decreases, showing a weak and negative prediction. These visuals align with the regression analysis results that IRs enhance the outcome (EM), while ERs may slightly detract from it.

Discussion

Research question 1: What is the relationship between the reward system (intrinsic and extrinsic rewards) on employee motivation at South African Military Health Service?

Findings revealed a positive relationship between both intrinsic and ERs with EM. Intrinsic rewards and EM studies have consistently shown that meaningful work, autonomy, recognition, praise, and opportunities for growth and development are more effective in motivating employees than ERs such as money and bonuses. Intrinsic motivation refers to the psychological rewards that individuals derive directly from engaging in a task, a phenomenon notably observed within military contexts (Thomas & Jansen 1996). In addition, from a military-specific perspective, there are psychological rewards that extend beyond the tasks themselves. For instance, a service member may experience a sense of pride in their affiliation with a specific branch of the military, fulfil social needs through interactions with fellow unit members, find comfort in various aspects of military life, or satisfy needs for power and status within the unit. These rewards can be categorised as ‘membership’ rewards, as individuals obtain them from their presence within the organisation rather than from direct task performance. While such psychological factors may not significantly influence task motivation and self-management, they are likely to play a crucial role in membership decisions, including joining, participating, attrition, transferring and re-enlisting (Oschman & Matjie 2025; Thomas & Jansen 1996).

Furthermore, informal IRs are highly valued by military personnel as they play a crucial role in retaining military members within the organisation (Silva, Lopes & Rosado 2020). Intrinsic rewards such as positive feedback significantly impact commitment and, consequently, enhance EM to perform (Câmara 2016; Meyer & Allen 1991). However, this is not always the case; a study conducted on the Lebanese military found that extrinsic motivation had a greater influence on job satisfaction and motivation. This was attributed to economic challenges, particularly the severe decline in purchasing power in the country (Dagher, Boustani & Khneyzer 2024). These findings are consistent with the

studies conducted by Rajesh et al. (2024), Jahangir (2024), Mazher (2022), and Sarjoon (2021), who found a positive and strong relationship between ERs and employees’ motivation. However, in this study, the findings further reveal a stronger and more significant relationship between intrinsic and EM, in line with previous studies (Awoniyi et al. 2022; Câmara 2016; Manzoor et al. 2021; Mazher 2022; Meyer & Allen 1991; Silva et al. 2020; Smitha & Suchitra 2023; Thomas & Jansen 1996). In line with Maslow’s theory (1943), Herzberg’s two-factor theory (1966), these findings confirm the theories’ assertions that the lower order needs’ (extrinsic and hygiene factors) satisfaction does not entirely lead to motivations, but when high order needs (intrinsic and motivator factors) are also satisfied, employees are more likely to be holistically motivated to perform exceptionally.

Research question 2: What is the impact of both intrinsic and extrinsic rewards on employee motivation within the South African Military Health Service

The regression analysis shows that intrinsic and ERs significantly influence employee motivation, but they explain only a modest amount (14.4%) of the total variation – indicating that while rewards matter, other factors also contribute to motivation. Specifically, the findings concluded that IRs are a strong positive predictor of employees’ motivation, while ERs account for the relationship negatively. The findings of this study corroborate the conclusions drawn by Manzoor et al. (2021), Chantal et al. (2022), and Ibitomi et al. (2022). Specifically, it has been demonstrated that employees who receive appreciation through non-financial rewards or incentive recognition (IR) maintain elevated levels of motivation over extended periods. This sustained motivation significantly enhances their performance outcomes, as supported by the research of Davis and Kohlmeier (2005), Porfeli and Mortimer (2010), as well as Smitha and Suchitra (2023). Existing similar body of research indicates that the motivational impact of ER diminishes over time (Bowles & Polanía-Reyes 2012; Frey & Jegen 2001; Kuvaas et al. 2017; Ryan & Deci 2000, 2008). This phenomenon aligns with the conclusions drawn by various scholars who assert that ER and IR often counteract one another within organisational contexts (Bowles & Polanía-Reyes 2012; Frey & Jegen 2001; Ryan & Deci 2008). Consequently, when IR effectively stimulates motivation and enhances performance, the presence of ER may not yield similar outcomes, and the reverse may also hold.

Intrinsic rewards, which encompass psychological benefits such as personal fulfilment and a profound sense of achievement, are significantly and positively correlated with enhanced motivation, in line with both Maslow’s theory (1943) and Herzberg’s (1966) theory that low-order needs or hygiene factors temporarily influence motivation while high-order needs or motivator factors permanently influence motivation. These internal drivers can foster a deeper engagement with tasks and cultivate a lasting passion for one’s work, especially for high-ranking officers and tenured

personnel who might be less concerned about economic rewards (Makhathini & Van Dyk 2018; Sharma 2014). Conversely, ERs, including tangible incentives such as monetary bonuses or public recognition, exhibit a minor yet negative and statistically significant influence on motivation (Câmara 2016; Meyer & Allen 1991). This finding highlights a critical area for further investigation, as an over-reliance on external incentives may undermine intrinsic motivation. By prioritising ERs, organisations risk diminishing the innate enthusiasm and commitment that are derived from personal satisfaction and self-driven accomplishments of the military personnel. Understanding this balance is essential for optimising motivational strategies in the military sector.

Limitations

This study has important findings that provide scientific contributions and practical insights. Although a sample size of 298 participants is considered adequate for quantitative research and generalising to the population, it may not be representative of the entire SANDF population. The study was cross-sectional and targeted only two provinces: Mpumalanga and Gauteng, which could limit the generalisability of the findings. The study employed a self-report survey as the main data collection method, which could be subject to biases and limitations. In addition, the findings of this study are specific to the SAMHS and may not be generalised to other 'arms of service', such as the South African Army (SAA), the South African Navy (SAN), or the South African Air Force (SAAF).

Future research

Future studies could investigate the construct using different research designs, such as mixed-methods or qualitative methods (interviews), to get personal experiences and explanations for why IRs are more valuable than ERs in the military. This will ensure that policies are amended with substantiated scientific knowledge because, as much as intrinsic seems to surpass ERs, people still need to be paid and rewarded financially for their extra efforts. Future studies can be longitudinal to track the participants' responses over the years when they have more family members or greater family responsibilities to gauge if intrinsic will still be more important than extrinsic. Lastly, future research may combine different arms in different provinces of the military and compare their findings on the constructs, and allow for generalisation within the SANDF.

Conclusion

The purpose of this study was to investigate the role of the rewards system on employees' motivation in the SAMHS. The findings of this study suggest that both intrinsic and ERs have a positive relationship with EM, while IRs further show a significant relationship with employees' motivation at SAMHS. However, only IR was found to positively predict EM. This conclusion suggests that the ER RS might be inadvertently encouraging behaviours that do not align with

the goals and values of the SAMHS because of its unique military culture, where honour and duty to serve dismantle the underlying reasons for the ERs, while positioning IRs positively.

The findings of this study have significant implications for SAMHS' human resource management and suggest that a well-designed rewards system can be a significant tool for motivating employees and enhancing job performance. The findings also support informal recognitions, such as a simple 'thank you' for doing a fantastic job or 'well done', which could influence employees to enhance their performance, especially in the military, where 'honour' and 'duty to serve' are more important than monetary benefits.

The study has important practical implications because it shows how important it is for SAMHS to understand the role of the rewards system and the need for targeted interventions that motivate employees to do a better job. This study underscores the importance of establishing a well-defined rewards system fit for the military culture, which will ensure fairness and transparency and prioritise strategies to enhance EM, such as recognition, praise, autonomy, a sense of achievement, and opportunities for growth and development to enhance job performance in the organisation. The findings of this study also imply that SAMHS management should provide regular, specific, and timely feedback to employees, highlighting their areas of strength and development.

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Competing interests

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

Authors' contributions

Paul Mabunda: Conceptualisation, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Validation, Writing – original draft, Writing – review & editing. Mokgata A. Matjie: Conceptualisation, Formal analysis, Investigation,

Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing. All authors reviewed the article, contributed to the discussion of results, approved the final version for submission and publication, and take responsibility for the integrity of its findings.

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Data availability

All data collected during research will be stored for a maximum of 5 years and made available from the corresponding author, Mokgata A. Matjie, upon reasonable request.

Disclaimer

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