

Performance appraisal mechanism and employee productivity in public hospitals in Mbeya – Tanzania: the mediating roles of working environment and management style

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Abstract

Purpose – The main purpose of this paper is to investigate the effect of performance appraisal mechanisms on employee productivity in public hospitals in Mbeya – Tanzania, when mediated by working environment and management style.

Design/methodology/approach – Using a sample of 338 employees, a cross-sectional design was adopted; questionnaires and interviews were used to collect primary data. Partial least squares structural equation modelling (PLS-SEM) was used to determine the relationship between the variables, and Sobel's test was performed to test the mediation effects.

Findings – A study found a strong association between performance appraisal mechanisms and employee productivity ($p < 0.05$). Goal setting significantly enhanced employee productivity ($p < 0.05$). Performance planning negatively impacted employee productivity, especially when combined with the working environment ($p < 0.05$). Assessment criteria had a significant positive effect on employee productivity when mediated by working environment and management style ($p < 0.001$).

Originality/value – This is the first study to examine how a performance appraisal system influences the productivity of public hospital employees in Tanzania. The study further explores the potential mediating effects of the work environment and management style on this relationship. By analysing the interplay between these variables and their impact on productivity, organizations can develop targeted strategies to boost employee performance and achieve superior results.

Keywords Performance appraisal mechanism, Assessment criteria, Goal setting, Performance planning, Employee productivity, Working environment, Management style

Paper type Research paper

1. Introduction

The practice of appraising employee performance emerged in Asia during the third century, where initial systems dealt with the challenge of avoiding bias based on personal preference

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(Jumbe, 2015). Overtime it was institutionalized in America and Western Europe (DeNisi & Murphy, 2017). The roots of modern performance appraisals can be traced in the Industrial Revolution, when they emerged to address concerns about worker output and efficiency (Kondrasuk, 2012). In the post-colonial era of the late 1950s and 1960s, African countries sought to modernize their public sectors and overcome inefficiencies. In 2004, Tanzania transitioned from its old performance appraisal system to a new system called Open Performance Review and Appraisal System (OPRAS). This move was driven by the shortcomings of the previous system, the Closed Annual Confidential Reporting System (CACRS). The CACRS generally lacked transparency, fairness, and employee feedback. The new appraisal system was designed to address such deficiencies through collaborative approaches and is perceived to be ideal for fostering a culture of accountability and meritocracy (Mathias, 2015).

Today, performance appraisal systems are used across several organizations, including public hospitals, where they play roles in the appraisals and managerial decisions (Mayaka & Oluoch, 2018). However, the effectiveness of these systems hinges on several factors, particularly management style and working environment. In public hospitals, the working environment and management style play a key role in influencing the effectiveness of performance appraisals. A supportive, transparent, and development-focused approach boosts motivation and productivity, while a negative or bureaucratic environment weakens appraisal benefits, leading to disengagement. The broader organizational context and leadership style are essential in shaping how appraisals impact productivity (Hameed, Jahangir, & Iqbal, 2023; Rinfret, Laplante, Lagacé, Deschamps, & Privé, 2020; Cummings *et al.*, 2018).

Likewise, Supportive and collaborative management styles have been shown to empower employees and boost productivity, whereas micromanagement tends to suppress innovation and employee engagement (Kassim, 2023). Furthermore, the working environment also significantly effects employee productivity (Yosiana, Hermawati, & Mas'ud, 2020). Additionally, a supportive working environment with ample resources tends to foster motivation, whereas a stressful environment with inadequate resources can hinder performance (Razzaka, Iftikharb, Alanazic, & Azizd, 2020). In this study, these factors serve as mediators in the relationship between performance appraisal mechanisms. Public hospitals in Tanzania are integrated into a tiered health system designed to provide affordable healthcare to the population. Managed by the government and funded through public resources, these hospitals aim to deliver both basic and specialized medical care to underserved communities. They are located in both urban and rural regions and are typically classified into district hospitals, regional referral hospitals, zonal referral hospitals, specialized hospitals, and the National referral hospital (Ishijima, Suzuki, Masaue, Mlay, & John, 2021).

In the context of public hospitals, conducting mediation tests is crucial when examining the relationship between performance appraisal mechanisms and employee productivity. These tests help identify how intermediary factors, such as the working environment and management style, influence the relationship. While performance appraisals may have a direct effect on productivity, their impact is largely shaped by the quality of the work environment and the management approach. Mediation tests can reveal whether the working environment and management style serve as key channels through which performance appraisals affect productivity. This insight is vital for developing more effective appraisal systems and enhancing employee performance, as it provides a deeper understanding of how these elements interact in the specific context of public hospitals (Aboramadan, Alolayyan, Turkmenoglu, Cicek, & Farao, 2021; Hafeez, Yingjun, Hafeez, Mansoor, & Rehman, 2019).

Furthermore, performance appraisal mechanisms involve goal setting, performance planning and assessment criteria. Effective implementation of these components can lead to improved patient satisfaction, boosted job satisfaction, skill improvement and increased employee productivity (Kandie & Kipkelwon, 2022; Mwita & Andrea, 2019). However, challenges like improper use of performance appraisal, favouritism and unclear goals can undermine their productivity (Badreddine & Aoun, 2019). Moreover, new performance

appraisal methods normally face resistance from employees used to traditional systems. This makes it harder to adopt new evaluation criteria and implement improvement plans. Thus, weakening the entire system and potentially hindering employee productivity (Alman & Yusuph, 2020).

Despite the extensive research on impact of performance appraisal on employee productivity in public hospitals, there is limited understanding of how performance appraisal mechanisms influence employee productivity when mediated by working environment and management style. This paper seeks to address this gap by examining the effects of performance appraisal mechanisms on employee productivity through the mediating roles of working environment and management style. The findings are anticipated to offer valuable insights for enhancing performance appraisal processes and improving healthcare services.

2. Literature review

2.1 Theoretical framework

Theories that describe the relationship between performance appraisal mechanism and employee productivity include equity, goal-setting and expectancy theories (Moraa & Datche, 2019; Kagotho, 2018). Equity theory (EQT), postulates that employees measure the fairness of their treatment based on a comparison of their inputs and outputs with those of their peers. The theory suggests that transparent and objective evaluation criteria can foster motivation and commitment among employees (Mutsoli & Kiruthu, 2019). The EQT underscores that involving workers in setting performance goals can improve their sense of fairness and control over outcomes (Belrhiti, Van Damme, Belalia, & Marchal, 2020). Likewise, the theory reveals that a supportive working environment and effective management style further contribute to perceptions of equity, thereby positively impacting employee productivity (Ryan, 2023; Dawwas, 2022). However, equity theory lacks emphasis on individual goals and aspirations, this weakness is complemented by goal setting theory (GST).

The GST highlights the role of clear and challenging goals in driving higher performance. Its key connection to performance appraisal mechanisms lies in establishing specific and achievable goals that directly align with the organization's objectives (Musangi, Ngui, & Senaji, 2023). Employee participation in goal setting promotes commitment and accountability (Makhmara, 2017). Likewise, supportive working environments and management styles complement the implementation of goal setting theory leading to enhanced motivation and employee productivity (Ryan, 2023; Dawwas, 2022). However, employees may disregard jobs that are not related to their achievements, this weakness is complemented by the expectancy theory (ET).

The ET suggests that individuals are motivated when they trust that their efforts will lead to the desired outcomes (Egbegi, 2018). Transparent assessment criteria, regular feedback, and alignment with employees' goals are crucial in this regard. Thus, incorporating expectancy theory principles into performance planning and goal setting ensures motivation and performance are raised (Mesfin, 2020; Uadiale, 2018).

These theories should reveal better the interplay between the variables. Thus, offering real-world insights and informing public hospitals to create strategies to boost employee performance and productivity.

2.2 Review of empirical literature

2.2.1 Performance planning and employee productivity. Performance planning (PP) involves setting specific goals and objectives for individuals or teams within a defined timeframe. This process includes identifying key performance indicators, aligning these goals with organizational objectives, and developing strategies to achieve them. Additionally, it helps to clarify expectations, allocate resources efficiently, and measure progress. Regular reviews

are crucial for tracking progress, providing feedback, and making necessary adjustments to ensure continuous improvement and achievement of desired outcomes (Owino, Oluoch, & Kimemia, 2019; Besciu & Cazacu, 2018). Previous research (Kandie & Kipkelwon, 2022; Owino *et al.*, 2019) has demonstrated that effective performance planning can significantly enhance employee productivity (EP).

2.2.2 Assessment criteria and employee productivity. Assessment criteria (AC) are standards used to evaluate the quality and effectiveness of work performance. They specify expectations for knowledge, skills, and outputs, ensuring both consistency and relevance. Furthermore, these criteria establish a clear framework for impartial evaluation and feedback, aiding in the assessment of achievements against established goals and guiding areas for improvement (Schang, Blotenberg, & Boywitt, 2021; Barman & Ajjawi, 2018).

In public hospitals, employee productivity (EP) refers to how effectively and efficiently doctors, nurses, support staff, and other personnel carry out their duties in delivering quality patient care and ensuring smooth hospital operations. This encompasses the prompt execution of medical procedures, patient interactions, compliance with healthcare protocols, and overall contributions to the hospital's goals. Research shows that assessment criteria play a crucial role in influencing EP (Rotea, Logofatu, & Ploscaru, 2018; Vatankhah *et al.*, 2017). Likewise, Alman and Yusuph (2020), and Ram Sing and Vadivelu (2019) show that AC have significant effect on employees' productivity.

2.2.3 Goal setting and employee productivity. Goal setting (GS) involves defining clear, measurable objectives, breaking the objectives down into manageable steps, and creating a structured plan for achievement. This approach helps individuals and organizations stay focused and motivated (Ogbeiwi, 2021; Teo & Low, 2016). Studies by Luke and Thoronjo (2021) and Chegenye, Mbithi, and Musiega (2015) demonstrate that when hospitals implement clear and achievable goals, employees are more motivated and focused, leading to enhanced performance. This highlights the importance of goal setting in improving patient care.

2.2.4 Performance appraisal mechanism and employee productivity. Performance appraisal mechanism (PAM) includes assessment criteria, performance planning, and goal setting, all of which are essential for evaluating employee performance. Goal setting provides clear direction by defining objectives, while PP breaks these goals into actionable steps and strategies. Assessment criteria establish standards for measuring progress and success, ensuring alignment with objectives. When these elements are effectively integrated, the appraisal process becomes more structured and effective, leading to improved employee performance and productivity (Luke & Thoronjo, 2021; Schang *et al.*, 2021; Besciu & Cazacu, 2018; Rotea *et al.*, 2018; Vatankhah *et al.*, 2017).

2.2.5 Working environment and employee productivity. A working environment (WENV) comprises the physical setting, social relationships, and organizational culture in which employees perform their tasks. It includes factors such as workplace layout, safety, equipment quality, and interpersonal dynamics. A positive environment fosters productivity, job satisfaction, and employee well-being, while a negative one leads to tension, inefficiency, and high turnover rates. Therefore, establishing a supportive and well-structured environment is crucial for success at both the individual and organizational levels (Chaudhry, Jariko, Mushtaque, Mahesar, & Ghani, 2017; Johnston. *et al.*, 2016). Ratnasari, Utami, and Prasetya (2023), Hayani, Asfiah, and Robbie (2021), Damayanti Fitri and Usman (2021), Parashakti, Fahlevi, Ekhsan, and Hadinata (2020) and Julius (2019) reveal that a conducive working environment significantly enhances employee performance and productivity. Their findings underscore the critical role that a supportive and well-organized workplace plays in fostering an atmosphere where employees can thrive and deliver their best work.

2.2.6 Management style and employee productivity. Management style (MGTS) refers to the methods administrators use to lead and direct their teams or organizations. It encompasses decision-making processes, task delegation, communication, and motivational strategies. Management styles can vary significantly, from autocratic, where the manager makes

decisions alone, to democratic, where team input is appreciated, and laissez-faire, where the manager offers minimal guidance and grants team members considerable autonomy (Tamimi & Sopiah, 2022; Trofimov *et al.*, 2019). Research indicates that management style can potentially effect employee productivity. There is ample evidence linking absenteeism, low morale, and job dissatisfaction to autocratic management practices that ultimately hinder productivity (Suwarno, 2023; AlFlayyeh & Alghamdi, 2023; Meifilina, Haris, Wulantari, Wulantari, & Yusriadi, 2021). Although, Marliza, Nyoto, and Sudarno (2022) suggests that the influence of management style on employee performance in hospitals may be limited.

2.2.7 Mediation mechanism. Mediation mechanism refers to the processes through which certain factors influence the relationship between PAM and EP. In this context, it encompasses how variables like MGTS and WENV can affect the effectiveness of performance appraisals. Most studies have primarily focused on the direct relationship between PAM and EP, often neglecting critical mediating factors (Siyum, 2020; Owino *et al.*, 2019). This oversight limits the understanding of how various elements, particularly mediation effects, can play a role in the relationship.

Evidence suggests that mediating factors can significantly influence employee productivity through various pathways (Suwarno, 2023; AlFlayyeh & Alghamdi, 2023). Specifically, the mediation of MGTS and WENV is crucial in the relationship between PAM and EP in public hospitals. A supportive and transparent MGTS, combined with a positive WENV, enhances employees' receptiveness to feedback, making performance appraisals more effective and motivating. When management practices align with employees' needs and promote a collaborative atmosphere, appraisals are more likely to yield improved productivity because employees will feel respected and engaged rather than scrutinized. Thus, effective mediation through MGTS and the WENV can bridge the gap between appraisal outcomes and tangible improvements in employee performance, leading to better overall efficiency and patient care in public hospitals (Hameed *et al.*, 2023; Aboramadan *et al.*, 2021).

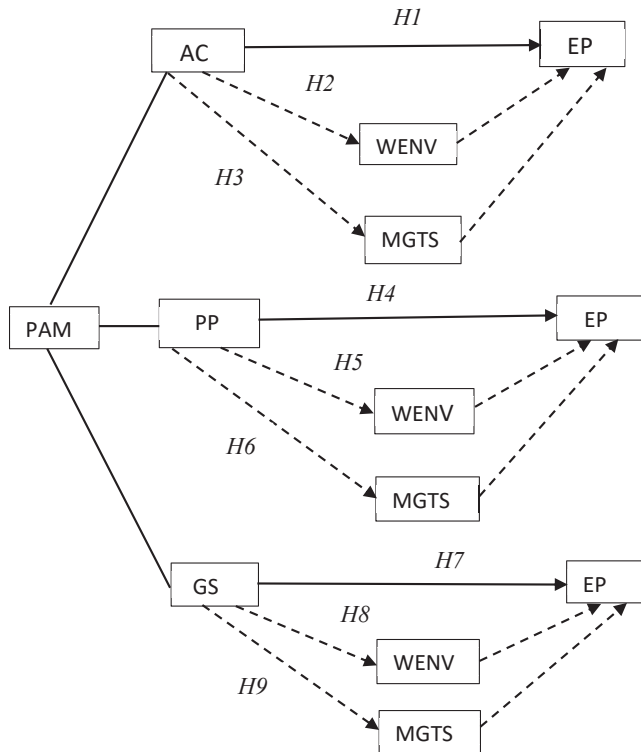
2.2.8 Research gap. While prior research explores the direct link between PAM and EP, a knowledge gap exists regarding the influence of mediating variables like WENV and MGTS. This study bridges the gap by examining how such mediating factors influence the relationship between PAM and EP. Furthermore, many studies employ multiple regression and descriptive statistics to analyse the relationship between PAM and EP (Kandie & Kipkelwon, 2022; Alman & Yusuph, 2020; Parashakti *et al.*, 2020). These methods face significant limitations in capturing complex relationships and effectively addressing issues such as missing data. This raises concerns about the accuracy and depth of insights derived from such analyses.

The partial least squares regression - structural equation modelling (PLS-SEM) offers a significant advantage over traditional methods by providing a more accurate and comprehensive understanding of such relationships. Its ability to handle complex hypotheses, mediation, moderation, and measurement errors ensures that the insights derived from the analysis are reliable and trustworthy (Kline, 2023; Hair, Hair, Sarstedt, Ringle, & Gudergan, 2023).

2.2.9 Hypothetical model. The study proposes a hypothetical model based on a literature review, where PAM can directly influence EP when mediated by MGT and WENV. The PAM is the independent variable, EP is the dependent variable while MGTS and WENV are mediating variables. The direct and interaction effects of the identified variables on the dependent variable are shown in Figure 1.

H1: predicts the direct relationship between AC and EP, H2: predicts the relationship between AC and EP when mediated through WENV, H3: Predicts the relationship between AC and EP when mediated through MGTS, H4: Predicts the direct relationship between PP and EP, H5: Predicts the relationship between PP and EP when mediated through WENV, H6: Predicts the relationship between PP and EP when mediated through MGTS, H7: Predicts the direct relationship between GS and EP, H8: Predicts the relationship between GS and EP when mediated through WENV and H9: Predicts the relationship between GS and EP when mediated through MGTS.

Based on the hypothetical model the following are the study objectives:



Source(s): Figure by author

Figure 1. Direct (solid lines) and interaction (dashed lines) effect of independent variables on employees' productivity whereas line without arrows represent components of Performance appraisal mechanism

- (1) To establish the direct effect of PP on EP and its effects when mediated by MGTS and WENV;
- (2) To evaluate the direct effect of GS on EP and its effects when mediated by MGTS and WENV, and;
- (3) To determine the direct effect of AC on EP and its effects when mediated by MGTS and WENV.

2.2.10 Hypotheses. Testable hypotheses for direct and indirect effects are as follows:

- H1. AC has no effect on EP in public hospitals.
- H2. AC has no effect on EP in public hospitals when mediated through WENV.
- H3. AC has no effect on EP in public hospitals when mediated through MGTS.
- H4. PP has no effect on EP in public hospitals.
- H5. PP has no effect on EP in public hospitals when mediated through WENV.
- H6. PP has no effect on EP in public hospitals when mediated through MGTS.

H7. GS has no effect on EP in public hospitals.

H8. GS has no effect on EP in public hospitals when mediated through WENV.

H9. GS has no effect on EP in public hospitals when mediated through MGTS.

3. Methodology

The study was conducted in Mbeya region where six public hospitals were purposively selected. The selected hospitals used OPRAS for staff appraisal—a subject of interest. Moreover, the hospitals share similar features with respect to core business and services. The study adopted the cross-section design which is appropriate for establishing a spatial relationship between variables of interest (Mashenene & Kumburu, 2023). Data for the analysis were gathered using a random sampling technique to ensure representativeness and minimize selection bias. The data collection process followed a specific protocol: first, a complete list of the target population (2,160 individuals) was compiled as the sampling frame. Next, a random sample of 338 participants was drawn from this population, using the Yamane formula and a computer-generated random number algorithm to guarantee that each individual had an equal chance of selection. Finally, the chosen participants were contacted and asked to participate in the study, where they were interviewed using questionnaires.

A five-point Likert scale was used for each construct where 1, 2, 3, 4 and 5 were codes for strongly disagree, disagree, neutral, agree and strongly agree; respectively. The scale was chosen because it provides a good balance between the number of responses and it was easy to interpret. Its empirical application shows that it is more reliable than other scaling techniques (De Winter & Dodou, 2010).

The PLS-SEM was employed to estimate the relationships between the variables (Hair, Black, Babin, Anderson, & Tatham, 2006). The model was preferred over other specifications because is capable of handling the relationship between observed and latent variables. Furthermore, PLS-SEM allows joint estimation of different equations encompassing mediating factors (Jodie & Ullman, 2006). Moreover, it allows the analysis of mediation effects through the Sobel's test (Preacher & Leonardelli, 2010). The model was estimated using AMOS version 23 in the SPSS software. The procedure entailed testing assumptions underlying the adoption of SEM including the multivariate normality which was assessed based on the levels of skewness and kurtosis while the linearity of dependent and independent variables was also assessed using scatter plots (Kline, 2018).

Moreover, Sobel Test (Preacher & Leonardelli, 2001) was used to assess the extent to which MGTS and WENV mediate the relationship between PAM and EP in Public hospitals. Following the Sobel Test, the bootstrapping method (Hayes, 2009), an extension of the Baron and Kenny mediation analysis, was applied using the Process Macro add-in for SPSS. The method involved resampling 5,000 observations from the original dataset to account for potential errors that could arise when estimating the model with traditional approaches based on the original data. In addition, both direct and indirect estimates (Hayes & Preacher, 2010) were computed, the relation was considered significant at 5% level.

4. Results and discussion

4.1 Exploratory factor analysis (EFA)

The Kaiser Meyer Olkin (KMO) and Bartlett's test were used to determine sampling adequacy and test for sphericity, respectively. KMO values ranged between 0.722–0.848 implying good sampling adequacy (Ghadroost *et al.*, 2021). The Bartlett's test confirmed significant correlations between the measured variables implying rejecting the null hypothesis that there were no correlations between items of the constructs (Table 1).

Table 1. Fitness of items for EFA in each study construct

Construct	KMO	Bartlett's test Chi-square value (<i>p</i> -value)
EP	0.848	567.382 (<0.001)
PAM	0.884	2317.012 (<0.001)
WENV	0.701	312.39 (<0.001)
MGTS	0.722	455.238 (<0.001)

Source(s): Table by authors

4.2 Confirmatory factor analysis

Cronbach's alpha was used to measure how closely related items measuring the same construct were. Acceptable values typically range from 0.7 to 0.9 (Adeniran, 2009) and all constructs met this criterion. The value of factor loadings that measure how strongly each item relates to its underlying construct, were above the recommended value of 0.5 (Comrey & Lee, 2013). Values of composite reliability (CR) were also above 0.7 as recommended (Hair, Ringle, & Sarstedt, 2011). Likewise, the average variances extracted (AVE), which represent the amount of variance in an item captured by its intended construct compared to error, were greater than 0.5 as required (Hair *et al.*, 2011). The square roots of AVE that measures how the constructs are distinct from each other, were greater than all correlations between each pair of constructs as required (Table 2). Additionally, the skewness values were between -3 and $+3$, and the kurtosis ranged from -10 to $+10$ (Appendix). Therefore, both skewness and kurtosis are acceptable, as they fall within the recommended thresholds (Ryu, 2011).

4.3 Results from the structural model

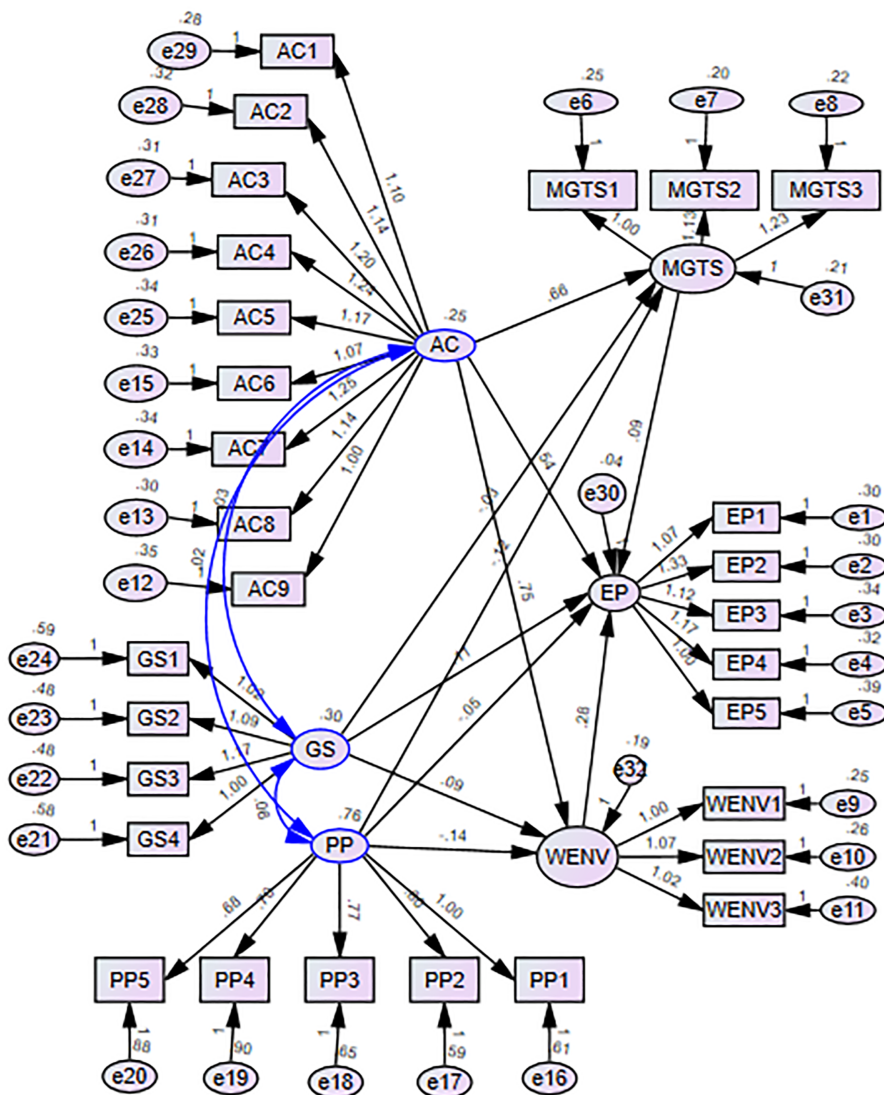
Results from the maximum likelihood method used to estimate the relationship between PAM and EP when mediated through WENV and MGTS that are presented in Figure 2, reveal that the overall model fit indices are acceptable. The chi-square fit statistics and all model fit indices including Tucker-Lewis index (TLI), comparative fit index (CFI), root mean square error of approximation (RAMSEA), relative fit index (RFI), root mean square residual (RMR), parsimony comparative fit index (PCFI) and normed fit index (NFI) indicate a good fit (Hair *et al.*, 2023; Schumacker & Lomax, 2016).

Overall, the results presented in Table 3 reveal sufficient statistical evidence to reject the hypotheses which state that AC and GS have no direct effect on EP in the case study hospitals ($p < 0.05$). Similarly, there is evidence to reject the hypotheses which state that AC and WENV, AC and MGTS, and; PP and WENV have no interaction effects on EP in the case study hospitals ($p < 0.05$).

Table 2. Validity and reliability tests of study constructs

Construct	Factor loading	Cronbach's alpha	CR	AVE	Square root of AVE
EP	0.707–0.796	0.819	0.874	0.581	0.762
AC	0.705–0.782	0.904	0.921	0.565	0.751
PP	0.653–0.792	0.765	0.843	0.518	0.719
GS	0.707–0.767	0.717	0.825	0.542	0.736
WENV	0.816–0.848	0.781	0.874	0.698	0.835
MGTS	0.848–0.885	0.842	0.905	0.760	0.871

Source(s): Table by authors



Chi-square=576.247 (363 df) p = .000
 model fit indices: CFI=.950 RMR=.039 TLI=.944 RFI=.863
 PCFI=.850 RMSEA=.040 NFI=.877

Source(s): Figure by author

Figure 2. Structural model for study constructs

4.4 Discussion of findings

4.4.1 Direct effects of variables on employees' productivity. Results presented in Table 4 reveal a positive relationship between AC and EP ($p < 0.001$) implying that unbiased, understandable, and realistic AC are essential for promoting EP within the hospitals. It

Table 3. Summary of decisions for hypothesis tested

Hypothesis	Decision
H4, H5, H8 and H9	Fail to reject the null
H1, H2, H3, H6 and H7	Reject the null

Source(s): Table by authors

Table 4. Effect of performance appraisal mechanisms on employees' productivity

Variables	Estimate	S.E.	<i>p</i>
EP ← AC	0.542	0.081	***
EP ← GS	0.108	0.040	0.008
EP ← PP	-0.048	0.025	0.059

Note(s): *** Means the variable was significant ($p < 0.001$)
Source(s): Table by authors

underscores the fact that well-defined and effectively implemented AC contribute to effective performance of employees. These findings are similar to previous studies by [Kephah \(2016\)](#) and [Onyije \(2015\)](#) who found that appropriate AC impacted positively on the EP. This empirical finding is also consistent with a study by [Mayaka and Oluoch \(2018\)](#) which established that a lack of effective AC had a negative influence on EP. Moreover, results also reveal a positive relationship between GS and EP ($p < 0.05$). Intuitively SMART goals benefit both healthcare providers and patients. For doctors, SMART goals clearly define daily patient volume expectations to allow objective performance evaluation. Importantly, these goals should be achievable and aligned with career goals and incentives. Time-bound aspects create urgency, promoting efficient healthcare delivery and boosting productivity. This aligns with GST, which emphasizes the importance of specific, challenging goals with feedback to improve performance. These findings are similar to a previous study by [Michael-Ofre and Opusunju \(2021\)](#) as well as [Moraa and Datche \(2019\)](#).

4.4.2 Mediation effects of variables on employees' productivity. Results that are presented in [Table 5](#) reveal that the effect of AC on EP when mediated by MGTS was significant at ($p < 0.05$). The results suggest that the management style implemented by public hospital administrations is likely conducive to supporting employees in performing their duties efficiently, thereby enhancing their overall productivity. Previous research ([AlFlayyeh & Alghamdi, 2023](#)) supports this view.

Moreover, the findings presented in [Table 6](#) reveal that AC had a significant effect on EP when mediated by WENV ($p < 0.001$). This infers that if there is a conducive working

Table 5. The mediation effect of MGTS on the association between PAM and EP

Variable	Direct estimates from SEM			Indirect estimates from Sobel's test		
	Coefficient	Standard error	<i>p</i> -value	Test statistic	Standard error	<i>p</i> -value
EP ← MGTS	0.092	0.045	0.039			
MGTS ← AC	0.656	0.077	***	1.988	0.030	0.046
MGTS ← GS	-0.030	0.061	0.617	-0.478	0.005	0.632
MGTS ← PP	-0.117	0.037	0.002	-1.716	0.006	0.086

Note(s): Significant at ($p < 0.001$)
Source(s): Table by authors

Table 6. The mediation effect of WENV on the association between PAM and EP

Variable	Direct estimates from SEM			Indirect estimates from Sobel's test		
	Coefficient	Standard error	p-value	Test statistic	Standard error	p-value
EP ← WENV	0.284	0.056	***			
WENV ← AC	0.751	0.083	***	4.423	0.048	***
WENV ← PP	-0.144	0.039	***	2.984	0.013	0.002
WENV ← GS	0.094	0.064	0.138	1.410	0.018	0.158

Note(s): *** Significant at ($p < 0.001$)
Source(s): Table by authors

environment then the relationship between AC and EP would be enhanced. The findings align to the study by [Zhenjing, Chupradit, Ku, Nassani, and Haffar \(2022\)](#).

Surprisingly, the study found a negative link between PP and EP, but only when mediated through the WENV ($p < 0.05$). While the exact reason for this negative association is not clear, it may suggest that PP with clear GS approaches and tracking mechanism keep employees focused, but if the WENV lacks resources or creates stress, it hinders the effectiveness of PP. Overall, a supportive WENV with good resources and focus on mental wellbeing is crucial for PP to translate to higher EP. As research shows, creating clear and comprehensive performance objectives can be challenging ([Parashakti et al., 2020](#); [Hafeez et al., 2019](#)). However, supervisors should focus on building a supportive WENV to ensure the PP is thorough. This means that the GS should capture the full range of an employee's work, leading to the desired outcomes.

5. Conclusion

This study found a connection between PAM and EP. It has also established that well-sought AC and GS led to a significant boost in EP. The study reveals that MGTS and WENV significantly influenced the effectiveness of the PAM.

5.1 Theoretical and practical implications

The theoretical and practical implications of the study revolve around two aspects: Firstly, it confirms that PAM can directly influence EP. Secondly, it shows that MGTS and WENV play a critical role in how effective PAM are. Supportive management and a positive WENV are key to translating PAM into higher EP. By translating the observed links between PAM and EP into strategic actions, public hospitals can significantly enhance employee performance. This, in turn, will contribute to achieving broader healthcare goals.

Public hospitals should prioritize building a supportive WENV that bolster EP. This condition and good management, coupled with PAM aligned with the National Health Policy (2017) and Sustainable Development Goal 3 (SDG 3), can enhance employee productivity and contribute to achieving better health care outcomes.

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Appendix

Table A1. Multivariate normality tests

Assessment of normality						
Variable	min	max	Skew	c.r	kurtosis	c.r
MGTS1	1.000	5.000	-1.220	-9.584	2.209	8.672
MGTS2	1.000	5.000	-1.026	-8.058	1.085	4.262
MGTS3	1.000	5.000	-1.236	-9.704	1.985	7.794
PP1	1.000	5.000	-0.755	-5.929	-0.287	-1.127
PP2	1.000	5.000	-0.837	-6.575	0.094	0.368
PP3	1.000	5.000	-0.711	-5.586	-0.151	-0.592
PP4	1.000	5.000	-0.642	-5.044	-0.530	-2.083
PP5	1.000	5.000	-0.830	-6.520	-0.166	-0.651
GS4	1.000	5.000	-0.957	-7.511	0.666	2.616
GS3	1.000	5.000	-0.777	-6.103	0.274	1.076
GS2	1.000	5.000	-0.694	-5.447	-0.118	-0.464
GS1	1.000	5.000	-0.623	-4.896	-0.118	-0.464
AC1	1.000	5.000	-0.858	-6.736	1.375	5.398
AC2	1.000	5.000	-1.145	-8.989	2.192	8.608
AC3	1.000	5.000	-0.867	-6.809	0.770	3.023
AC4	1.000	5.000	-1.147	-9.010	1.913	7.512
AC5	1.000	5.000	-0.945	-7.421	1.410	5.538
AC6	1.000	5.000	-0.961	-7.550	1.514	5.943
AC7	1.000	5.000	-1.012	-7.947	1.465	5.752
AC8	1.000	5.000	-0.690	-5.416	0.589	2.313
AC9	1.000	5.000	-0.690	-5.419	0.393	1.543
EP5	1.000	5.000	-0.870	-6.832	1.040	4.084
EP4	1.000	5.000	-0.801	-6.292	1.229	4.827
EP3	1.000	5.000	-0.677	-5.317	0.446	1.752
EP2	1.000	5.000	-1.043	-8.191	1.682	6.606
EP1	1.000	5.000	-0.740	-5.811	1.063	4.175
Multivariate					52.131	13.140

Note(s): Tolerable standards of skewness fall between -3 and +3 and kurtosis is applicable from a range of -10 and + 10

Source(s): Ryu (2011)

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