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PSYCHOLOGICAL CAPITAL AS A MODERATOR IN TRANSFORMATIONAL LEADERSHIP AND ORGANIZATIONAL CULTURE IN HEALTHCARE

Bambang Haryanto [(a)1] *Suryanto* [(b)] *Yetty Dwi Lestari* [(c)] *Kazi Musa* [(d)]

[(a)] *Postgraduate of Human Resources Development, Airlangga University, Surabaya, Indonesia; E-mail: bambang.haryanto-2021@pasca.unair.ac.id*
[(b)] *Professor, Faculty of Psychology, Airlangga University, Surabaya, Indonesia; E-mail: suryanto@psikologi.unair.ac.id*
[(c)] *Associate Professor, Faculty of Economics & Business, Airlangga University, Surabaya, Indonesia; E-mail: yettydl76@feb.unair.ac.id*
[(d)] *PhD, Accounting Research Institute, University of Technology MARA, Shah Alam, Malaysia; E-mail: kazimusa@uitm.edu.my*

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ABSTRACT

The background of this study is based on the challenges faced by the hospital industry in improving employee productivity, primarily through effective leadership and a conducive organizational culture. However, the moderating role of psychological Capital in this relationship remains unclear, especially in healthcare. This study investigates the interplay between transformational leadership, organizational culture, psychological Capital, and employee productivity in the hospital industry. This study employs quantitative methods, specifically the Structural Equation Modeling (SEM) approach, using SmartPLS software. The research data were collected through a survey of employees in several large hospitals, with a sufficient number of respondents who were statistically representative. The study results indicate that organizational culture significantly mediates the relationship between transformational leadership and employee productivity. At the same time, psychological Capital does not play an essential role as a moderator in this relationship. These findings highlight the significant role of organizational culture as a crucial link between transformational leadership style and enhanced employee productivity. In practice, the results of this study provide recommendations for hospital management to strengthen transformational leadership development programs that foster a collaborative, innovative, and employee-involved organizational culture. The limitations of this study lie in the cross-sectional design used and the limited geographic and organizational context. We recommend conducting further research using a longitudinal approach and expanding the research context to enhance the generalizability of the findings.

INTRODUCTION

Modern healthcare organizations, especially hospitals, now face increasingly complex challenges due to demographic changes, societal expectations, and economic pressures. These shifts necessitate hospitals to adopt adaptive and visionary leadership to ensure organizational sustainability while maintaining the quality of healthcare services (Ibrahim et al., 2024). In this context, transformational leadership has proven to be a practical strategic approach to creating a positive work environment, increasing the morale of healthcare workers, and encouraging service innovation that directly impacts the quality of patient care (Ystaas et al., 2023). With the increasing number of older adults and the complexity of patient needs, hospitals in various countries must be more responsive and flexible. Such goals can be achieved through leadership that drives change and fosters ongoing cross-functional collaboration (Jones & Dolsten, 2024).

Transformational leadership was first articulated by Bass and Avolio (1994) and is characterized as a leadership style in which leaders influence their followers' fundamental values, beliefs, and attitudes, motivating them to achieve performance levels that surpass their anticipated outcomes (Hidayat & Masdupi, 2023). Transformational leaders create a shared vision and encourage innovation, motivating employees to prioritize organizational goals over personal interests, thereby driving positive change. This leadership style also plays a significant role in shaping organizational culture. Through effective role models, motivation, and communication, transformational leaders instill values and norms that can shift the organizational culture in a more adaptive and innovative direction (Lasrado & Kassem, 2020). Thus, transformational leadership impacts individuals and collectively influences organizational culture, which is a system of shared values and

[1]Corresponding author: *ORCID ID: 0009-0004-3854-1125*

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practices that guide behavior in the workplace to achieve common goals. In addition to organizational culture, employee psychological capital factors also influence the effectiveness of health organizations' performance. Psychological Capital refers to an individual's positive psychological state, characterized by four main components: hope (optimism about a better future), self-efficacy (the belief in one's abilities), resilience (the ability to withstand adversity), and optimism. Employees with high psychological Capital tend to be more resilient, proactive, and creative when facing work challenges. Previous research has shown that this positive psychological state is associated with increased employee innovation and performance. Transformational leadership acts as a contextual resource that can strengthen subordinates' psychological Capital through the vision, support, and inspiration it provides. An effective transformational leader is expected to foster employee self-confidence, hope, and mental resilience, motivating employees to exceed expectations and contribute innovatively to the organization (Karimi et al., 2023).

Despite the abundant evidence supporting the benefits of transformational leadership, studies that simultaneously integrate the relationship between transformational leadership, organizational culture, and psychological Capital in the hospital context are still limited. Cross-country research in the healthcare sector shows that psychological Capital plays a significant mediator in strengthening the influence of transformational leadership on positive work attitudes such as job satisfaction and organizational commitment, especially when leaders can build hope, self-efficacy, resilience, and optimism in employees, which underscores the importance of psychological Capital in leadership effectiveness (Ali et al., 2020). Nevertheless, it remains unclear if analogous results are relevant to hospitals in Indonesia. Consequently, this research was conducted quantitatively across multiple large hospitals in Jakarta and Yogyakarta to examine the relationship between transformational leadership, organizational culture, and psychological Capital within the Indonesian healthcare setting. This study aimed to understand the extent to which transformational leadership influences organizational culture and employee psychological capital, as well as how these three elements interact to enhance the performance and effectiveness of hospitals.

This article begins with an introduction to the importance of transformational leadership in enhancing the effectiveness of healthcare organizations, particularly through its role in shaping organizational culture and individual psychological Capital. The literature review section outlines current theories and empirical findings that support the relationships between leadership, organizational culture, psychological Capital (PsyCap), and employee productivity. Next, the results section presents the results of the SmartPLS analysis, which shows a significant mediation effect of organizational culture but no moderating effect of PsyCap. The discussion section interprets the findings, evaluates the support or rejection of the initial hypotheses, outlines practical implications, and provides post hoc explanations for any insignificant results. Finally, the conclusion section presents the main conclusions and suggestions for further research in the context of human resource development in the healthcare sector.

LITERATURE REVIEW

In the complex dynamics of healthcare organizations, transformational leadership has been widely recognized as an effective leadership style in creating positive change and inspiring employees to achieve performance beyond expectations. This leadership is characterized by delivering a strong vision, individual empowerment, and encouraging innovation (Thompson & McKenna, 2022). In hospitals, transformational leadership is crucial for enhancing service quality, fostering collaboration among medical teams, and cultivating a culture of patient safety (Tsapnidou et al., 2024). Transformational leaders can internalize organizational values through role models and strategic communication, thereby forming an adaptive and performance-driven organizational culture.

Organizational culture is a system of values and norms that develops within an organization and becomes the basis for the collective behavior of its members. A strong culture aligned with the organization's vision will foster individual synergy and enhance productivity through shared perceptions and a commitment to common goals (Almutairi et al., 2022). A culture emphasizing safety, professionalism, and collaboration in healthcare organizations has increased service efficiency and patient satisfaction (Momo Kadia et al., 2019). However, the influence of culture does stand alone and acts as a mediator in the relationship between leadership and organizational performance outcomes. A study by Peña and Caruajulca (2024) showed that organizational culture significantly mediates the influence of transformational leadership on organizational performance, emphasizing the importance of culture development as a strategic step in effective leadership (Peña & Caruajulca, 2024); another study, also in a private hospital, found that credible leadership (as a form of transformational leadership) was able to increase employee work engagement indirectly through organizational culture. The study's results indicated that organizational culture acted as a full mediator of the influence of leadership on nurses' work engagement (Srimulyani & Hermanto, 2022).

On the other hand, psychological Capital (PsyCap) emerges as a crucial psychological resource for enhancing individual and organizational performance. Psychological Capital (PsyCap) has four main components: self-efficacy, hope, resilience, and optimism. Individuals with high Psychological Capital tend to be more resilient to work pressure and exhibit greater initiative and engagement (Nafei, 2015). Furthermore, alongside its direct influence on positive workplace behaviors, PsyCap also serves as a moderating factor in the relationship between leadership and organizational outcomes. Additional research has shown that PsyCap amplifies the link between leadership style and organizational culture, indicating that the positive impact of transformational leadership is more substantial in individuals who possess high levels of PsyCap (Muhammad, 2022); another study indicated that PsyCap functions as a moderator that improves the positive relationship between transformational leadership and innovative work behavior. Elevated PsyCap levels among employees significantly bolster the effects of transformational leadership on innovation and task performance. This research suggests that employee psychological capital is a valuable asset that enhances the influence of transformational leadership on job outcomes (Saif et al., 2024).

As a key measure of organizational success, employee productivity is influenced by several factors, including leadership, culture, and individual psychological factors. In the hospital sector, productivity means the quantity of services, efficiency, accuracy, and patient satisfaction. A study by Boamah et al. (2018) demonstrated that transformational leadership significantly enhanced the productivity of health workers by fostering a favorable work climate and increased engagement (Boamah et al., 2018). Furthermore, a strong organizational culture supports employees in maintaining consistent work quality and strengthens their sense of belonging (Liang et al., 2022).

The results suggest a significant connection among transformational leadership, organizational culture, psychological Capital (PsyCap), and employee productivity. Nonetheless, the simultaneous exploration of these four variables within Indonesian hospitals has not been extensively researched. Consequently, this research aims to investigate the impact of transformational leadership on organizational culture and employee productivity, utilizing organizational culture as a mediating variable and Psychological Capital (PsyCap) as a moderating factor. Thus, based on these findings, the following null and alternative hypotheses were formulated:

H_{o1}: Transformational leadership has no significant influence on employee productivity with organizational culture as a mediating variable.

H_{a1}: Transformational leadership has a significant influence on employee productivity with organizational culture as a mediating variable.

H_{o2}: Transformational leadership has no significant influence on employee productivity with psychological Capital as a moderating variable.

H_{a2}: Transformational leadership positively affects productivity with employee psychological capital as a moderating variable.

These hypotheses will be tested through empirical investigation to determine the direct, mediating, and moderating effects of the variables within the context of a healthcare organization.

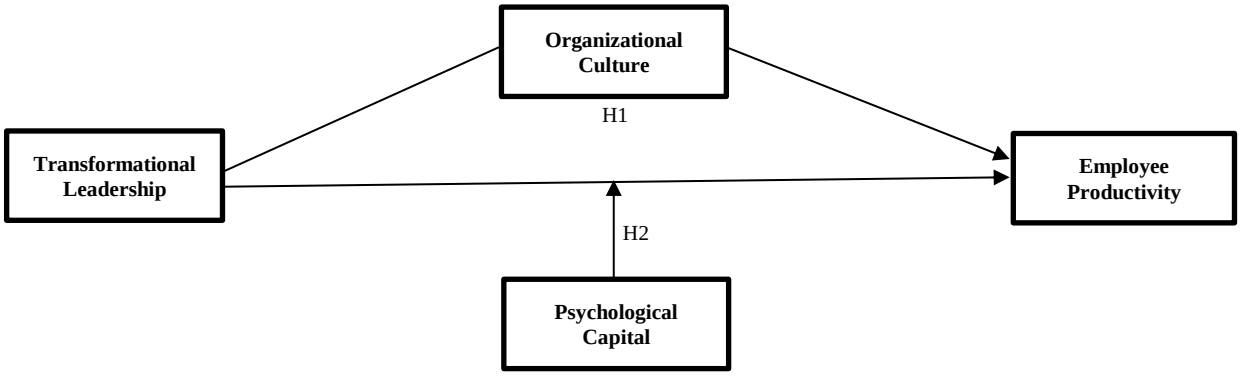

Figure 1. Conceptual Framework

MATERIALS AND METHODS

Study Design

This research uses a multi-source, observational design and adopts a quantitative methodology (Cook & Cook, 2008). Employing quantitative research offers a methodical approach to gathering and examining data. Additionally, the quantitative research method enables the use of statistical methods to reach dependable conclusions (Faisal-E-Alam, 2024).

Sample Size

The study population refers to a distinct group of individuals or entities that share common characteristics (Miller & Lengler, 2025). A random sampling method was used to choose the study population's sampling frame. This sampling frame included employees working in healthcare and medical roles at the largest hospitals in two cities, Jakarta and Yogyakarta, Indonesia. A formula designed for finite populations was used to calculate the sample size, yielding a sample size of 109 (Permatasari et al., 2025).

Measures

Evaluation of constructs involves a multi-step process using survey data collected through a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The variables in this study include Transformational Leadership (TL), Organizational Culture (OC), Psychological Capital (PsyCap), and Employee Productivity (EP) (Kraiger et al., 1993).

Table 1. Measure the Design of the Questionnaire

Variable	Dimension	Item Code	Design Of Item	Sources
Employee Productivity	-	EP1	I demonstrate exceptional work performance.	(Van Der Vegt et al., 2000)
		EP2	I accomplish tasks swiftly and effectively.	
		EP3	I maintain elevated standards when executing tasks.	

		EP4	I have reached outstanding levels of task performance.	
		EP5	I consistently surpass our team's goals.	
Transformational Leadership	Vision	TLVission	My manager articulates a distinct and optimistic outlook for the future.	(Carless et al., 2000)
	Staff Development	TLDevelopment	My manager recognizes each staff member as an individual and provides support and encouragement for their growth.	
	Supportive Leadership	TLSupportif	My supervisor provides support and acknowledges the team's efforts.	
	Empowerment	TLEmpowerment	My manager cultivates an environment of trust, involvement, and teamwork among colleagues.	
	Innovative Thinking	TLInnovative	My manager motivates us to approach problems from different perspectives and to challenge long-held beliefs.	
	Lead by Example	TLExample	My supervisor is straightforward about his principles and exemplifies them in action.	
	Charisma	TLCharisma	My manager fosters a sense of pride and respect in others and motivates me with their exceptional competence.	
Organizational Culture	Consistency	OCCony1	I possess a collection of characteristics that establish a sense of belonging to the organization.	(Denison & Neale, 2018)
		OCCony2	The responsibilities given to me align with my skills and passions.	
		OCCony3	The principles upheld by the institution align with the organization's objectives.	
	Involvement	OCInt1	This organization inspires and involves me.	
		OCInt2	The organization guarantees that I will contribute to the decision-making process.	
		OCInt3	We work collaboratively as a team within this organization.	
	Adaptability	OCAdap1	I am able to stay employed at this institution for an extended duration.	
		OCAdap2	I can gain knowledge from my errors.	
		OCAdap3	I can make adjustments in my position to accomplish job responsibilities.	
	Mission	OCMion1	I understand the mission of the Company.	
		OCMion2	I understand the strategic policy direction of the Company.	
		OCMion3	I understand the objectives of the organization.	
Psychological Capital	-	Psycap1	I assertively represent the branch when interacting with others.	(Supriharyanti et al., 2024)
		Psycap2	I consider various methods to reach my work objectives.	
		Psycap3	I envision them achieving success in their job.	
		Psycap4	I typically handle challenges at work in different ways.	
		Psycap5	I have a positive outlook on their future prospects concerning employment.	
		Psycap6	I consistently focus on the bright aspects of matters concerning their job.	

Data Collection

Sampling Technique: The study employed a stratified random sampling technique to collect primary data. Stratification was based on hospital departments and professional roles to ensure a diverse representation of respondents. The selected hospitals are among the largest in Jakarta and Yogyakarta, Indonesia, providing a comprehensive perspective from diverse geographical and organizational contexts.

Data Analysis

This study utilized the Partial Least Squares (PLS) method for data analysis (Henseler et al., 2016). The choice of PLS was motivated by several factors, including its ability to handle small sample sizes and analyze complex models with numerous

latent variables and indicators (Henseler et al., 2009). Additionally, this method is well-suited for exploratory research and does not require specific data distribution assumptions (Huyler & McGill, 2019); PLS is particularly effective for examining interaction effects and relationships between variables (Vikrant et al., 2021); it does not necessitate multivariate normal data and employs bootstrapping techniques to estimate the significance of path coefficients (Bollen & Stine, 1992). The quantitative research employed a questionnaire as the primary instrument for data collection, using a scoring format (Mallinckrodt & Wang, 2004). Data processing was conducted using the SmartPLS software, version 4.

Ethical Considerations

Before giving consent, participants were provided with detailed information about the study, including the title, objectives, and methodology. The identities and roles of the participants were kept confidential. The researchers emphasized the participants' autonomy, allowing them to withdraw their responses at any stage of the study. After data collection, thorough verification was done to correct any omissions or inaccuracies, ensuring optimal precision. The results were presented with maximum objectivity, ensuring that the study adhered to strict ethical norms (Faisal-E-Alam, 2024).

RESULTS

Model testing using the PLS-SEM approach shows that all constructs meet excellent reliability and convergent validity criteria. Cronbach's alpha and Composite Reliability (CR) for each latent variable are above 0.7, while the Average Variance Extracted (AVE) exceeds 0.5. Specifically, transformational leadership has a Cronbach's alpha of 0.958, a composite reliability (CR) of 0.963, and an average variance extracted (AVE) of 0.799. Organizational culture has an alpha of 0.941, CR 0.945, and AVE 0.683. Psychological Capital shows an alpha of 0.946, CR 0.949, and AVE 0.789. Employee productivity has an alpha of 0.892, CR 0.894, and AVE 0.755. These numbers show that the items are highly consistent with each other and that enough variance is considered in each construct. This means that the instrument meets the requirements for reliability and convergent validity.

Table 2. Construct Reliability and Validity

	Cronbach's alpha	rho_a	Rho_c	AVE
Employee Productivity	0.892	0.894	0.925	0.755
Organizational Culture	0.941	0.945	0.951	0.683
Psychological Capital	0.946	0.949	0.957	0.789
Transformational Leadership	0.958	0.963	0.965	0.799

Source: SMARTPLS 4

Figure 1 illustrates the outcomes of estimating the structural model using the PLS-SEM method with bootstrapping. The analysis results indicate a strong connection between transformational leadership and organizational culture, with a path coefficient of 0.796, a t-statistic of 5.786, and a p-value of 0.000 (indicating significance). Additionally, organizational culture demonstrates a substantial positive impact on employee productivity, showcasing a path coefficient of 0.725, a t-statistic of 5.786, and a p-value of 0.000 (indicating significance). When examining the direct relationship between transformational leadership and employee productivity, after factoring in organizational culture as a mediator, the resulting path coefficient is minimal (0.000) with a t-statistic of 0.000, signaling that this direct relationship lacks significance. Furthermore, analyzing the effect of psychological Capital on the relationship between transformational leadership and employee productivity yields a path coefficient of 0.034, a t-statistic of 1.166, and a p-value of 0.244.

Table 3. Hypothesis test

	Original Sample (0)	Sample Mean (M)	STDEV	T Statistics (|0/STDEV|)	P Values
Transformational Leadership -> Organizational Culture -> Employee Productivity	0.577	0.579	0.100	5.786	0.000
Psychological Capital x Transformational Leadership -> Employee Productivity	0.066	0.059	0.056	1.166	0.244

Source: SMARTPLS 4

These results indicate that the moderating effect of psychological Capital in this relationship is not statistically significant. The coefficient of determination (R^2) values obtained from the model are as follows: The R^2 value for the organizational culture variable is 0.633, indicating that 63.3% of the variation in organizational culture is explained by transformational leadership. At the same time, the R^2 value for the employee productivity variable is 0.596, meaning that 59.6% of the variation in employee productivity is explained by organizational culture and the moderating effect of psychological Capital. These results present empirical data from the structural model without providing a theoretical interpretation; the next section will discuss this interpretation in more detail.

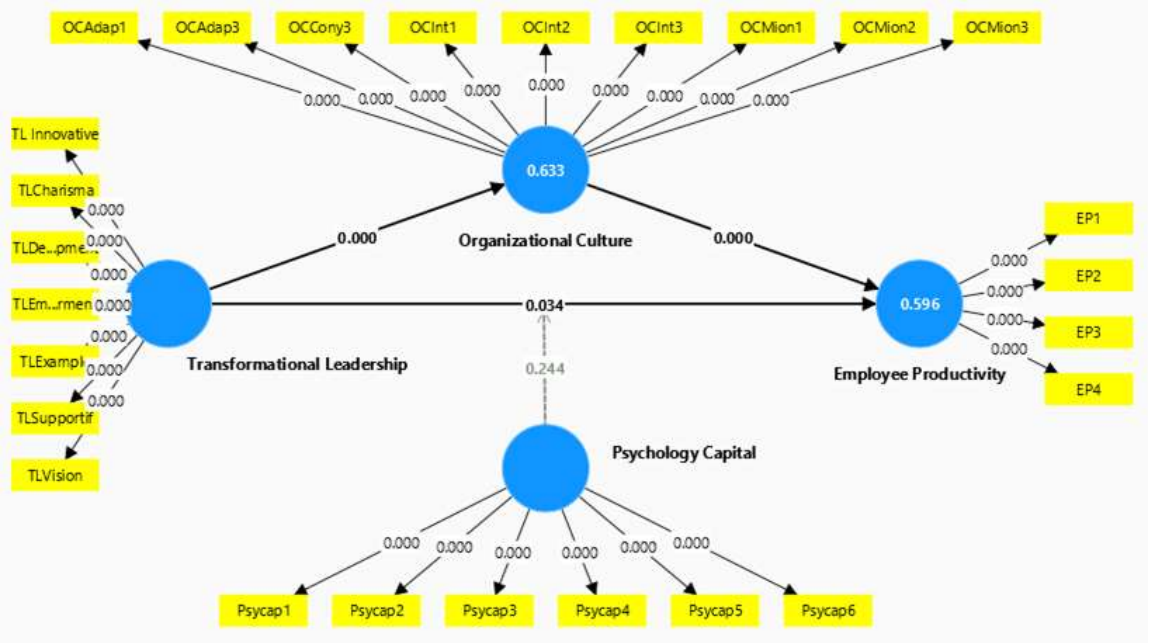

Figure 2. Second Stage Bootstrapping Test
Source: SMARTPLS 4

Interpret the above study's results within the context of the healthcare organization under study. In general, the findings support the critical role of organizational culture as a mediator, showing that psychological Capital has no significant moderating effect. First, it can be concluded that H_{01} is rejected and H_{a1} is accepted, indicating that organizational culture mediates the relationship between transformational leadership and employee productivity. Effective transformational leadership fosters a strong organizational culture, which in turn encourages increased employee productivity. This mediation significantly reduces the direct influence of leadership on productivity. The evidence suggests that transformational leadership may not optimally impact productivity without fostering a conducive organizational culture. In the context of a healthcare organization, a transformational leader who can instill positive values, a shared vision, a teamwork ethic, and high service standards will create an organizational culture that supports performance. A culture focused on superior service and collaboration motivates employees to work more productively, thereby enhancing the quality and efficiency of health services. This approach aligns with the organizational logic that improving internal culture will enhance operational performance; higher employee productivity leads to greater service output and more efficient use of resources, ultimately benefiting the organization economically.

Additionally, the results show that H_{02} is not supported, indicating that psychological Capital does not influence how transformational leadership affects employee productivity. In other words, differences in the level of psychological Capital among employees do not significantly alter the magnitude of the effect of transformational leadership on productivity. For both employees with high and low psychological Capital, the transformational leadership style of leaders has a relatively similar impact on their productivity. These results in healthcare organizations imply that leadership efforts to improve employee productivity will be equally effective across groups of employees, regardless of differences in their psychological Capital. One possible explanation is that transformational leadership in healthcare environments has such a strong and pervasive influence (e.g., through inspiring vision and role models) that each employee is motivated to increase productivity at a relatively homogeneous level. Individual psychological capital factors, such as optimism, self-confidence, and resilience, may still play a direct role in employee daily performance but do not specifically strengthen or weaken the impact of transformational leadership. Thus, leaders' primary focus should be on building a culture and system that encourages all employees to be productive while also developing employee psychological capital as a general supporting factor.

From a managerial and organizational perspective, the results of this study provide clear strategic directions for future action. First, investing in the development of transformational leadership and organizational culture is crucial for enhancing performance and productivity in healthcare organizations. Leaders must act as change agents who instill positive organizational values, as their impact on employee productivity is mediated through cultural improvements. This step has economic justification: a strong work culture will foster service consistency, reduce employee turnover, and enhance operational efficiency, all of which contribute to the organization's long-term financial performance. Despite a lack of evidence linking employee psychological capital to leadership effects, it remains a valuable intangible asset for organizations. Employees with high psychological Capital are generally more innovative, stress-resistant, and proactive. Therefore, organizations need to continue supporting and developing psychological Capital (for example, through self-development training or employee wellness programs), not solely as a lever for leadership effectiveness, but as an effort to directly improve employee productivity and work quality. The combination of strong transformational leadership, a conducive organizational culture, and human resources with high psychological power is believed to produce optimal healthcare performance. In other words, the findings of this study emphasize the importance of a holistic approach: Leaders

must build a positive culture as a medium for change while ensuring that each employee has a high psychological capacity and motivation to contribute productively. This strategy is believed to sustainably increase employee productivity and provide a positive economic impact for the healthcare organization.

DISCUSSIONS

Based on the findings from SmartPLS, there is a significant mediating effect between organizational culture and the influence of transformational leadership on employee productivity, demonstrated by a T-statistic of 5.786 and a p-value of 0.000 ($p < 0.05$). Conversely, a p-value of 0.244 ($p > 0.05$) and a T-statistic of 1.166 indicate that the secondary hypothesis, suggesting that psychological Capital impacts the link between transformational leadership and employee productivity, is not validated. With a T-statistic of 1.166 and a p-value of 0.244 ($p > 0.05$), it is evident that the secondary hypothesis that psychological Capital affects the relationship between transformational leadership and employee productivity is not supported. Further analysis shows that psychological Capital may lack sufficient strength to influence the connection between transformational leadership and productivity. This could be attributed to similar PsyCap levels among respondents or the possibility that the impact of leadership is so substantial that it does not rely on differences in PsyCap.

The findings of this research offer a deep insight into how organizational culture and psychological Capital influence the connection between transformational leadership and employee productivity within the healthcare sector. In particular, the analysis reveals that organizational culture significantly mediates this relationship. This conclusion is supported by a high path coefficient of 0.577, a t-statistic of 5.786, and a p-value below 0.05. This result aligns with earlier research by Bass and Avolio (1994), which highlighted that transformational leaders affect employee performance indirectly by fostering a supportive, motivating, and efficient work environment. Consequently, the transformational leadership approach has effectively promoted values and behaviors that cultivate a positive organizational culture, ultimately enhancing employee productivity (Bass & Avolio, 1994).

In contrast, this research revealed that psychological Capital did not significantly moderate the link between transformational leadership and employee productivity. The low interaction path coefficient of 0.066, a t-statistic of 1.166, and a p-value exceeding 0.05 support this conclusion. This result differs from earlier studies, such as those by Alessandri et al. (2018), which suggested that psychological Capital plays a critical moderating role in the relationship between leadership and performance (Alessandri et al., 2018). This difference in results is likely due to the specific context of the hospital organization studied, where organizational culture factors appear more dominant in influencing productivity than individual psychological characteristics. Additionally, the transformational leadership style in this context may not have had a significant influence on employee psychological capital, thereby creating a minimal moderating effect.

According to Anderson and Gerbing (1988) and Hair et al. (2019

), the strong two-stage PLS-SEM analysis used in this study helps explain the complicated relationships between the variables. This conclusion is evident from the high R^2 values for organizational culture (0.633) and employee productivity (0.596), which indicate the good predictive power of the theoretical model in this study. However, the fact that psychological Capital did not have a significant moderating effect raises new questions about how psychological traits and factors in the work environment affect each other (Anderson & Gerbing, 1988; Hair et al., 2019).

Compared to previous studies, this study's results reinforce the significant role of organizational culture, as noted by Hartnell et al. (2016). However, they also raise doubts about the effectiveness of psychological Capital as a moderator in this specific context. These findings contribute to the broader discussion on transformational leadership by highlighting the need for a comprehensive approach that considers individual and organizational dimensions to improve productivity (Hartnell et al., 2016).

Practically, this study's implications suggest that hospital management should place greater emphasis on strengthening organizational culture through transformational leadership as a primary strategy for improving productivity. However, developing psychological Capital remains important, although its moderating effect was not proven significant in this study. More research should be conducted to gain a deeper understanding of the factors that influence this relationship, such as the specific situations or conditions that may enhance the effectiveness of psychological Capital as a moderator.

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CONCLUSIONS

This research explores the relationship among transformational leadership, organizational culture, psychological Capital, and employee productivity within a hospital setting. The findings reveal that organizational culture significantly mediates and enhances the connection between transformational leadership and employee productivity. Conversely, psychological Capital was not found to have a notable moderating effect on this relationship, suggesting that its impact in this scenario is comparatively minimal.

Overall, this research revealed that organizational culture plays a vital role in mediating the beneficial effects of transformational leadership on employee productivity. This result highlights the crucial role of transformational leaders in creating a supportive work environment that promotes collaboration, innovation, and employee engagement, ultimately enhancing the organization's overall performance.

This study's distinctive contribution is the explicit recognition of how organizational culture acts as a crucial mediator between leadership style and productivity, particularly within the hospital setting. Theoretically, this finding enhances our understanding of the mechanisms by which leadership style can effectively influence productivity by fostering a strong organizational culture. Managerially, this study offers practical recommendations for hospital management to develop leadership programs more intensively, thereby supporting the formation of a conducive and productive organizational culture.

Nonetheless, this research has multiple limitations, including the adoption of a cross-sectional design that restricts the capacity to infer causal relationships definitively. Additionally, the study's specific context within a particular region's hospital industry may impact the generalizability of the study's results.

We suggest employing a longitudinal methodology in future studies to enhance our comprehension of how the relationship between variables evolves. Future research could investigate different organizational settings or industry sectors to determine whether these results are consistent across various contexts. Furthermore, examining supplementary variables such as job satisfaction or organizational commitment may yield a deeper understanding of the processes that influence the connection between leadership style and employee productivity.

In closing, this study confirms that organizational culture is a central element in leadership dynamics, offers practical guidance for hospital management, and opens up opportunities for further research on various psychological and organizational factors that drive improved employee performance.

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