

Impact of Physical and Behavioral Component of Workplace Quality on Employee Productivity, Using Mediation of Workplace Quality: A Cross-Sectional Study on Healthcare Workers

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ABSTRACT

Keywords:

Healthcare management, healthcare service, workplace quality, employee performance, employee motivation, employee behavior.

Workplace quality plays a pivotal role in shaping employee performance, particularly in the healthcare sector, where both physical and behavioral factors significantly influence productivity and job satisfaction. This study aims to explore the relationship between personal components (PC), behavioral components (BC), workplace quality (WQ), and employee performance (EP), with a specific focus on the mediating role of WQ. A quantitative, cross-sectional design was employed, using a convenient sampling method to administer survey of healthcare workers in a large public-sector tertiary care hospital in Karachi city. Structural Equation Modelling (PLS-SEM) was used to analyze the relationships among these variables. The results reveal that both PC and BC have a significant positive influence on WQ, with beta coefficients of 0.395 and 0.269, respectively. Additionally, WQ exhibits a strong positive impact on EP ($\beta = 0.476$). While PC directly enhances EP ($\beta = 0.100$), BC demonstrates a slight negative direct effect, necessitating further investigation. Importantly, WQ was found to partially mediate the relationship between PC, BC, and EP, underscoring its critical role in linking personal and behavioral attributes to workplace performance. These findings highlight the necessity of fostering a high-quality work environment to enhance employee motivation, satisfaction, and productivity. Given the essential role of workplace quality in determining employee performance, organizations should prioritize improving workplace conditions to maximize efficiency and job commitment, ultimately leading to better healthcare service delivery.

INTRODUCTION

By prioritizing both the physical and psychosocial aspects of the workplace, viewed through the lens of either the organization or the individual employee, varying across different industries. (Colenberg & Jylhä, 2022). In a normal working environment, crucial aspects include both physical and behavioral components. Aspects linked to

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an employee's ability to connect physically to their workplace are referred to as the physical environment. Meanwhile, the manners in which colleagues interact with one another are linked through behavioral environmental elements. (Hafee et al., 2019). The physical surroundings of an organization and how they are arranged can influence how employees behave at work. He contended that enhancing the company's spatial arrangement should focus on the requirements of employees in order to boost efficiency. (Massoudi & Hamdi, 2017). Improving employee behavior and attitude of employees providing opportunities for professional growth and clear communication also contribute to a positive workplace culture (Myint & Pomsuwan, n.d.,2024). Individuals working in unfavorable environments might experience diminished productivity and encounter work-related health issues, leading to increased absenteeism and workforce turnover. (Leblebici, 2012). Work environments that prioritize the health and wellness of their staff can be a target to aim for, yet they might bring about both intended or unintended impacts on additional factors, like worker satisfaction, efficiency, expenses, company reputation, and risk management. (Tay et al., 2022). As organizations become progressively worried about their workforce's efficiency in fulfilling assigned tasks, this, in turn, plays a vital role in the overall success of the organization (Elaho, 2022).

Problem and Gap

The paper has two main aims based on the knowledge gaps identified in previous research. First indicated, it examines lack of integrated approach because previous research often separates physical and behavioral components of workplace quality. This study addresses the gap by investigating both aspects simultaneously and their combined impact on productivity. The workplace quality of the physical environment of the office becomes more essential to employees in supporting them in completing their assignments. Secondly the study aims to explore workplace quality as a mediator. Therefore, with a positive workplace atmosphere for both co-workers, superiors, and subordinates and comfortable workspace, the results thus obtained will be valuable, meaning that productivity will increase. So, it might be said that there is a connection between productivity and the workplace (Lestari & Wulansari, 2024). Moreover, there is a scarcity of cross-sectional studies on this topic specifically in the healthcare sector. Thus, this study can provide valuable insights into the current state of workplace quality and productivity among healthcare workers.

Objectives and Research Questions

The objective of this study is to explore the impact of physical and behavioral components of workplace quality on employee's productivity with mediation of workplace quality. Therefore, questions were raised whether physical and behavioral components exposed to healthcare workers have any influence on the workplace quality and performance of healthcare workers. It is also questioned whether workplace quality must play any mediation role in the relationship between BC, PC and EP.

Physical Component of workplace quality

The physical work setting is the space where individuals find compatibility with their roles. Elements of this work environment encompass lighting, air ventilation, and temperature. (Najihah Erani Binti Hamidi et al., 2020). Healthcare practitioners are becoming more aware of the importance of an effectively structured physical work setting, as this setting plays a vital role in creating encouraging and supportive workplaces. Enhanced designs can significantly simplify the tasks of employees. (Shetty et al., 2024). Therefore, component (physical) is the means that have an advantage to improve job outcomes as well as employee wellness (Huang, Robertson and Chang, 2004).

Behavioral Component of workplace quality

Behavior results from a combination of skills, chances, and the drive to make informed social care choices that prioritize individual preferences and rely on the best information available. (Tay et al., 2022). Improving employee behavior and attitude of employees providing opportunities for professional growth and clear communication also contribute to a positive workplace culture (Myint & Pomsuwan, n.d.). Within medical facilities, nursing professionals play a key role in patient care, which emphasizes the necessity of establishing a workplace that is supportive of management in order to boost the dedication of nursing staff. (Pattali et al., 2024). Numerous studies have been carried out to validate what nearly all workers are aware of: recognition for a task performed excellently holds significant importance and serves as the strongest driver of employee efficiency. (Kwarteng et al., 2024). Acknowledging their accomplishments can result in internal benefits; and with these benefits, employees may inspire themselves and operate at their highest potential. (Manzoor et al., 2021).

Workplace Quality

The term workplace can denote either the physical work setting, or the behavioral conditions associated with work, depending on the viewpoint of the organization or the individual, and it varies across different industries. (Colenberg & Jylhä, 2022). A comfortable work

environment for staff ought to be established to guarantee they have access to necessary amenities according to the job they are assigned (“The Impacts of Physical Workplace Environment (PWE) on Employees Productivity,” 2023). The so-called workplace relationship is defined as the information exchange between individuals and groups who want to complete their goals (Tran et al., 2018).

Support from management will strengthen social bonds and foster employee commitment within the workplace. (Pattali et al., 2024). Well-equipped employees at the workplace will be very satisfied and show a high level of engagement for their organization (Najihah Erani Binti Hamidi et al., 2020). Several studies have emphasized that HCWs in better work environments show significantly lower job dissatisfaction and burnout rates and achieve a better quality of care (Sasaki et al., 2025).

Employee Productivity

The concept of ‘productivity’ pertains to evaluating how effectively and efficiently a person transforms input resources into productive output. (Rasool et al., 2021). As organizations grow increasingly worried, their focus shifts toward ensuring that employees efficiently accomplish their assigned tasks, which ultimately plays a significant role in the organization's overall prosperity. (Elaho, 2022). Workers reach a higher level of performance when their efficiency aligns with the organization objectives. (Kwarteng et al., 2024). Work environments that promote the health and wellness of their staff can serve as an objective on their own, but they might also influence other aspects, whether positively or negatively, including job satisfaction, efficiency, expenses, company reputation, and potential risks. (Tay et al., 2022).

Healthcare Services

The quality of service aims to fulfill the wants and requirements while ensuring precise delivery that aligns with what customers expect. A key factor that fosters patient loyalty toward hospital services is the high level of service provided by the hospital, allowing it to effectively compete with other healthcare facilities. (Apriliani et al., n.d). Healthcare services are designed to address the health requirements of the community, offering assistance focused on maintaining and enhancing personal wellness. (Bevere & Faccilongo, 2024).

Healthcare Workers

Healthcare professionals' job performance encompasses their responsibilities which include their work abilities, clinical competencies and work quality (task performance), and those that fall outside of the job descriptions (contextual performance) (Nowrouzi-Kia et al., 2022). They also conduct research and improve or develop concepts, theories and operational

methods to advance evidence-based healthcare. Their duties also incorporate the supervision of other healthcare workers (Mohanty et al., 2019), demanding that healthcare professionals deliver assistance and aid to patients amidst various challenges (Marin et al., 2024). Additionally, dissatisfaction in their roles could adversely affect their mental and physical health, intensifying stress, anxiety, and other related conditions (Rigas et al., 2025).

Hypotheses Development

Physical component and Workplace Quality

The physical component of workplace environment plays a vital role for employee health, sustainability, and organizational success (Lemma et al., 2022). The work environment refers to the overall atmosphere and conditions of the physical site and facilities where work is conducted (Almita et al., 2023).

The concept of dignity within the healthcare environment is considered essential for effective practice, emphasized in various global healthcare policies. (Klinner et al., 2023) Workplace interior design establishes a direct link between people and their environment. It encompasses the shape, texture, and layout of design elements like partitions and transitions, furniture, lighting solutions and sources, soundproofing, materials, decorative items, and technology associated with the area. (Colenberg & Jylhä, 2022). Concentrating on the physical environment has become a research area with great potential because it is crucial to provide a favorable work environment for healthcare workers, which in turn affects the standard of care provided. (Shetty et al., 2024). Therefore, the relationship may be predicted as.

H1: *There is an impact of physical component on workplace quality of healthcare workers.*

Behavioral component and Workplace Quality

The behavioral aspects refer to the perception employees have regarding their colleagues' readiness to offer support related to their job responsibilities. Due to its impact on the overall workplace atmosphere, this factor will play a crucial role in shaping employees' attitudes and effectiveness at their jobs. (Ahmed et al., 2020). Behavioral component and workplace quality components which may have the highest effect on the office output (Haynes. B. P. 2008). Beliefs stand that human - to - human communication over giving encouragement and individualized support on the way to all the employees (Salaman. et al, 2005).

Hence, it is hypothesized that.

H2: *There is an impact of behavioral component on workplace quality of healthcare workers*

Physical components and Healthcare Workers Productivity

For employers in the public sector, and especially within the healthcare sector, keeping their staff engaged at work seems highly relevant to retain them, given the altruistic or intrinsic motivation characterizing the jobs in such sectors (Moscelli et al., 2024). There are many components that are defined by Stup in 2003 toward the achievement of the employees' productivity. The components like equipment, physical workplace, expressive work, feedback on performance, expectation, rewards for good or bad system, SOP's, information, attitude and skill. Earlier research concerning the constructed environment has investigated the impact of workplace settings, where knowledge employees dedicate significant time, on various aspects associated with occupant wellness, such as efficiency, comfort levels, and health, leading to numerous insights (Arata et al., 2025). Administration determines how accurately to optimize productivity of workers about two key area that is individual inspiration and work environment infra-structure (Sekar, C. (2011). Hence, the correlation can be anticipated as

H3: *There is a greater impact of physical components on the healthcare worker's productivity.*

Behavioral component and Healthcare Workers Productivity

The organization needs to discover what influences its employees and establish both formal and informal structures for employee's praise that behave in the way required (Chandrasekar, 2011). A good environment encourages collaboration and improves overall morale and enhances communication and productivity. According to the author (Martic,2023) employee relationship impacts organizational goals. Employee relationships can improve productivity, communication, trust, collaboration and a positive work environment (Myint & Pomsuwan, n.d.). Therefore, it is suggested that

H4: *There is a greater impact of behavioral component on the healthcare worker's productivity.*

Workplace Quality and Employee Productivity

Govindarajulu in 2004 argued that in the 21st century, more strategic approaches are taking in businesses for management to boost its productivity by increasing standard of employee's performance. That is noticeable in the study results of Patterson. et al, 2003; the more the staff is fulfilled with their careers then better will business probably be achieved in conditions of successive profits and production. Sinha (2001) explained that performance of employees is dependent upon determination and on the visibility of employees by themselves on doing their jobs. Stup in 2003 described in order to achieve standard performance, employers must give directives to employees to do the task on track for achieving organizational goals or targets. Engaged employees have a profound bond with their responsibilities at work. They consistently put in significant effort to achieve the objectives tied

to their positions and assignments. Additionally, they often take on additional duties outside their designated roles, optimizing resources as they reach their targets and competently execute their tasks. (Chandani et al., 2016).

Based on the above discussion, it is hypothesized that there is an impact of workplace quality on employee productivity of healthcare workers

H5: *There is an impact of workplace quality on employee productivity of healthcare workers*
Workplace Quality, Physical component and Employee Productivity

The importance of the physical surroundings in the workplace, highlighting its deep impact on workers well-being, productivity, and satisfaction (“The Impacts of Physical Workplace Environment (PWE) on Employees Productivity,” 2023). Tabassum et al (2021) highlight that individual’s productivity is influenced by various aspects, including of the physical workplace condition and unfavorable working conditions such as lighting, temperature, noise level and office layout. The majority of factors that impact workers' safety and health result in a decline in their productivity.

Following the above discussion, it is hypothesized that Workplace quality mediates the relationship between physical factor and employee productivity.

H6: *Workplace quality mediates the relationship between physical components and employee productivity.*

Workplace Quality, Behavioral Component and Employee Productivity

Job motivation, work innovative behavior, presence, colleagues’ engagement, and career development are all affected by how strongly they are connected to an organization. (Ozturk A, et al. 2021). Employee involvement increases motivation and output, while disengaged employees often underperform (Fleming & Asplund, 2007). Employee level of commitment increases workers productivity in companies which improve their levels of commitment (Zhenjing et al., 2022). The impact of group norms and cohesiveness on team effectiveness, with ideal teams displaying high standards and strong cohesion, positively influencing productivity (Aziz & Osman, 2025). In light of the preceding conversation, it is hypothesized that Workplace quality mediates the relationship between behavioral factors and employee productivity.

H7: *Workplace quality mediates the relationship between behavioral components and employee productivity.*

CONCEPTUAL FRAMEWORK

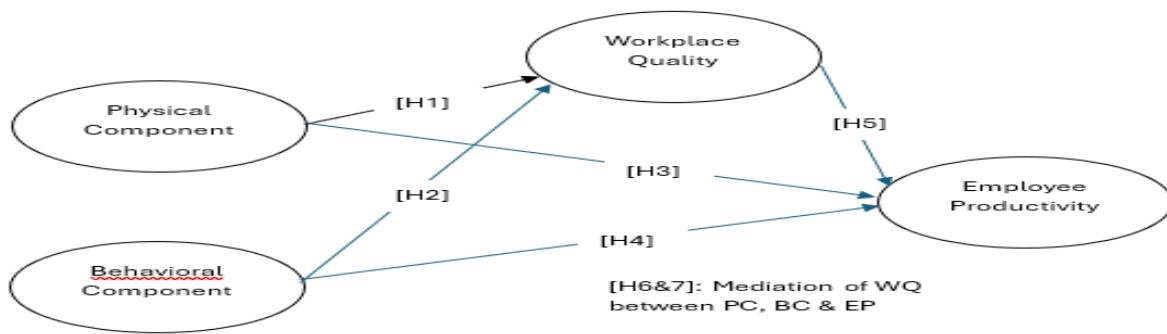


Fig 1: Conceptual Framework

METHODOLOGY

Research Design

A quantitative research design with cross-sectional time order has been employed with data collected from research setting of a major public sector tertiary care hospital in Karachi city. A structured questionnaire was administered with 5-point Likert-scale, deduced from extant literature on healthcare management. The demographic data was analyzed with SPSS-26. Structural modeling technique with Smart PLS 4 was employed for the analysis of findings.

Research Population and Sampling Procedures

This research survey is meticulously designed to acquire data from diverse populations of people involved in decision making at different healthcare settings and levels. These individuals may contribute valuable insights into the various factors influencing their decision-making styles (Ahmed 2024). It is therefore employed convenience sampling as our chosen method, recognizing its compatibility with a managerial audience characterized by a large and diverse representation (Sekaran and Bougie 2016). Consequently, the aim of the human population of this study included doctors, paramedical staff such as nurses, pharmacy personnels, pathologists, biochemists, radiologists and technicians. It also included HR and admin staff of the healthcare organization. The population size was around 5000 employees in the public sector healthcare organization which both the genders was involved having age around 28 to 60 for this study. Considering various thumb rules of the PLS-SEM, a sample size of 150 medical professionals was administered (Hair et al., 2017; Memon et al., 2020). The respondents include doctors, paramedical and administrative staff.

Scale and Measures

A closed ended questionnaire with five-point Likert scale was used to administer the survey, with a brief of the demographic profile of respondents and four latent constructs. Those

constructs are Employee Productivity as dependent variable, and Physical Factors, behavioral factors as independent variable while workplace quality act as a mediator.

Table 3.1: Scale and measures

S. No.	Variables Name	No. of Items	Likert Type	Source
1.	Physical Component	05	5-point	(Apiri Joel Amakiri,2019)
2.	Behavioural Component	08	5-point	(Leblebici, 2012)
3.	Workplace Quality	04	5-point	(Abdul Haeba Raml, 2019)
4.	Employee productivity	05	5-point	(Ong Choon Hee et al., 2019)

Ethical Consideration

This research prioritizes ethical conduct throughout the study. Participants provided informed consent before participating, knowing the purpose and usage of their responses. Anonymity and confidentiality were ensured through data anonymization and restricted access (Fleming and Zegwaard 2018).

ANALYSIS

Demographic profile of respondents

Table 1 depicts the respondents' profile in terms of "gender, age, educational level, and work experience.

Table 1: Demographic Profile

Items		Frequencies	Percentages
Gender	Male	91	60.7
	Female	59	39.3
Age	20-39 years	68	45.3
	40-50 years	63	42.0
	51-60 years	19	12.7
Work Experience	<5 yrs	51	34.0
	6-10 yrs	43	28.7
	11-15 yrs	19	12.7
	16-20 yrs	22	14.7
	over 20 yrs	15	10.0
Level of Education	Certificate	1	0.7
	Diploma	16	10.7
	Graduation	31	20.7
	Masters	10	6.7
	Doctorate	23	15.3

The demographic profile of respondents reveals a diverse workforce of employees working in the tertiary care hospital. Most of the employees are male, comprising 60.7% (91 employees), while females make up 39.3% (59 employees). In terms of age-wise distribution, employees aged 20-39 years represent the largest group at 45.3% (68 employees), followed by those aged 40-50 years at 42% (63 employees). A smaller portion of employees fall within the 51-60-year category to 12.7% (19 employees). Regarding work experience, the majority have less than 5

years of experience (34%, 51 employees), followed by those with 6-10 years (28.7%, 43 employees). The rest of the employees are evenly spread across the 11-15 years (12.7%, 19 employees), 16-20 years (14.7%, 22 employees), and over 20 years (10%, 15 employees) categories. The education level of the employees varies, with the majority holding a diploma (10.7%, 16 employees) or a graduate degree (20.7%, 31 employees), while a smaller proportion have completed a master's degree (6.7%, 10 employees), obtained a doctorate (15.3%, 23 employees), or held a certificate (0.7%, 1 employee).

Measurement Model

Quality criteria of the model was analyzed through the algorithm running the PLS-SEM, on Smart PLS (Hair, et.al., 2017). The following table 2 highlights the findings.

Table 2: Reliability and Convergent Validity

	Item Loadings	α	CR	AVE
BC1	0.990	0.988	0.990	0.923
BC2	0.980			
BC3	0.892			
BC4	0.964			
BC5	0.986			
BC6	0.976			
BC7	0.982			
BC8	0.909			
EP1	0.964	0.986	0.989	0.948
EP2	0.971			
EP3	0.979			
EP4	0.986			
EP5	0.968			
PC1	0.846	0.865	0.901	0.647
PC2	0.879			
PC3	0.751			
PC4	0.752			
PC5	0.785			
WQ1	0.702	0.777	0.853	0.593
WQ2	0.731			
WQ3	0.788			
WQ4	0.852			

Behavioral Component (BC), Employee Productivity (EP), Physical Component (PC), Workplace Quality (WQ). Cronbach Alpha (α) > 0.7, Composite Reliability (CR) > 0.7, Average Variance Extracted (AVE) > 0.5.

The measurement model established strong reliability and convergent validity across all constructs, as indicated by the item loadings, Cronbach's alpha (α), composite reliability (CR), and average variance extracted (AVE). The behavioral component (BC) exhibited excellent internal consistency with $\alpha = 0.988$, CR = 0.990, and AVE = 0.923, with all item loadings

exceeding 0.89. Employee productivity (EP) also displayed high reliability ($\alpha = 0.986$, CR = 0.989, AVE = 0.948), with item loadings ranging from 0.964 to 0.986. The physical component (PC) achieved acceptable reliability ($\alpha = 0.865$, CR = 0.901, AVE = 0.647), with item loadings from 0.751 to 0.879. Workplace quality (WQ) met the minimum thresholds for reliability and validity ($\alpha = 0.777$, CR = 0.853, AVE = 0.593), with item loadings between 0.702 and 0.852. All constructs surpassed the recommended thresholds of $\alpha > 0.7$, CR > 0.7 , and AVE > 0.5 , indicating adequate reliability and convergent validity (Fornell & Larcker, 1981; Hair et al., 2019; Nunnally & Bernstein, 1994). These results confirm that the measurement model is robust and suitable for further structural analysis.

Discriminant validity

The discriminant validity was measured through the Heterotrait-Monotrait ratio (HTMT), Fornell-Larcker Criterion and the cross-loadings of construct items (Fornell & Larcker, 1981; Hair et al., 2022), as shown in tables.

Table 3: Heterotrait-Monotrait ratio (HTMT)

	BC	EP	PC	WQ
BC				
EP	0.173			
PC	0.505	0.312		
WQ	0.509	0.487	0.606	

The highest HTMT value observed is between PC and WQ (0.606), while the lowest is between BC and EP (0.173). However, all the HTMT values are well below the common threshold of below 0.85 indicating acceptable discriminant validity, suggesting that the constructs are adequately distinct (Henseler et al., 2015; Sarstedt et al., 2021). Likewise, the table shows that the diagonal values (square roots of AVE) for BC (0.961), EP (0.974), PC (0.804), and WQ (0.770) are all higher than their corresponding inter-construct correlations, indicating satisfactory discriminant validity (Fornell & Larcker, 1981). These results confirm that each construct is empirically distinct, supporting the model's validity (Hair et al., 2019)

Table 4: Fornell-Larcker Criterion

	BC	EP	PC	WQ
BC	0.961			
EP	0.17	0.974		
PC	0.474	0.304	0.804	
WQ	0.456	0.485	0.522	0.77

Moreover, the table shows that all items have their highest loadings on their respective constructs, such as BC1 to BC8 loading highest on BC, EP1 to EP5 on EP, PC1 to PC5 on PC,

and WQ1 to WQ4 on WQ, which further confirms that the discriminant validity is established (Hair et al., 2019).

Table 5: Cross-Loadings

	BC	EP	PC	WQ
BC1	0.990	0.160	0.456	0.457
BC2	0.980	0.157	0.450	0.460
BC3	0.892	0.150	0.437	0.342
BC4	0.964	0.187	0.483	0.462
BC5	0.986	0.169	0.463	0.460
BC6	0.976	0.135	0.455	0.476
BC7	0.982	0.161	0.442	0.440
BC8	0.909	0.192	0.462	0.384
EP1	0.184	0.964	0.272	0.457
EP2	0.154	0.971	0.263	0.430
EP3	0.176	0.979	0.308	0.472
EP4	0.169	0.986	0.328	0.479
EP5	0.147	0.968	0.302	0.516
PC1	0.426	0.278	0.846	0.508
PC2	0.396	0.297	0.879	0.489
PC3	0.321	0.106	0.751	0.307
PC4	0.313	0.226	0.752	0.291
PC5	0.422	0.259	0.785	0.429
WQ1	0.285	0.057	0.345	0.702
WQ2	0.405	0.332	0.488	0.731
WQ3	0.353	0.346	0.377	0.788
WQ4	0.346	0.590	0.389	0.852

Model Explanatory Power

The model explains a substantial proportion of variance in the dependent variables. The R-square value for WQ is 0.329 (adjusted R-square = 0.327), indicating that PC and BC together explain 32.9% of the variance in workplace quality. Additionally, the R-square value for EP is 0.245 (adjusted R-square = 0.243), suggesting that WQ, PC, and BC collectively account for 24.5% of the variance in employee productivity (Cohen, 1988; Hair et al., 2017; Vinzi et al., 2010).

Table 6: Explanatory Power

	R-square	R-square adjusted
EP	0.245	0.243
WQ	0.329	0.327

Structural Model

A bootstrapping process of 5000 sub-samples was run on the Smart PLS to test the hypothesized relationship, as established in figure 2

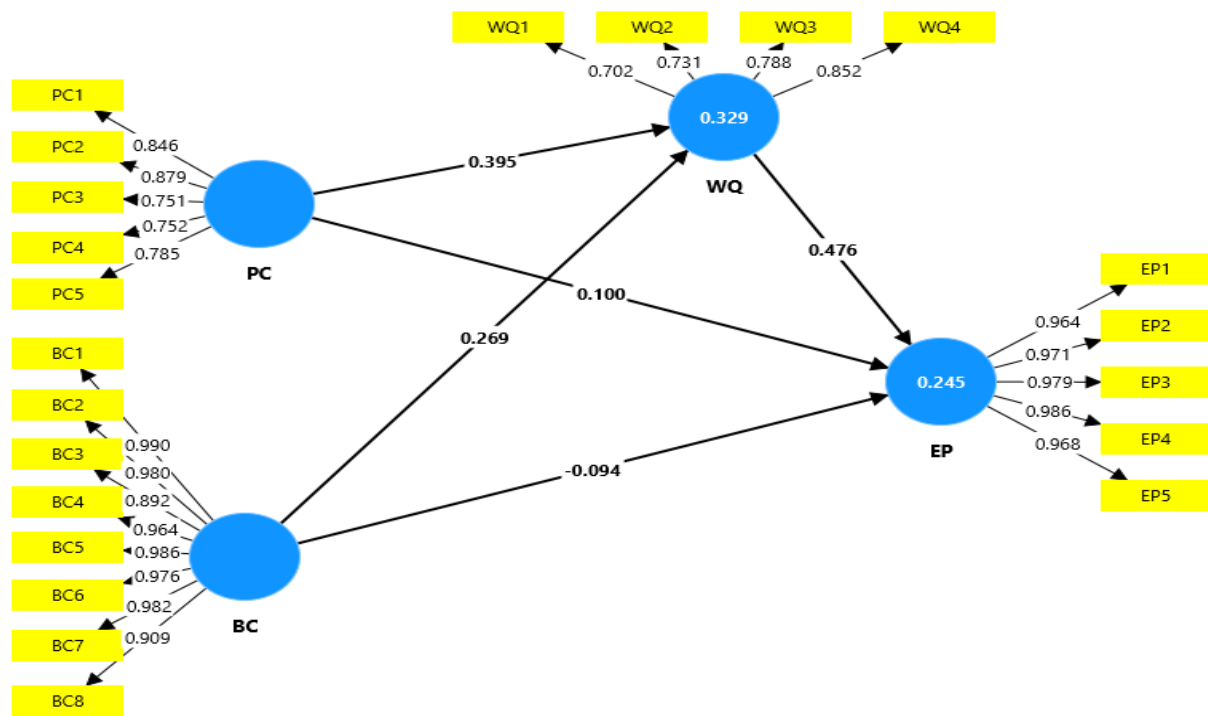


Figure 2: The Model Output

Table 7: Structural Relationships

Hypotheses		Beta coefficient	S.D.	T statistics	P values
H1	PC -> WQ	0.395	0.027	14.370	0.000
H2	BC -> WQ	0.269	0.028	9.707	0.000
H3	PC -> EP	0.100	0.039	2.547	0.011
H4	BC -> EP	-0.094	0.037	2.577	0.010
H5	WQ -> EP	0.476	0.029	16.268	0.000

Table 7 exhibit the hypotheses testing results indicating significant relationships among the Physical Component (PC), Behavioral Component (BC), Workplace Quality (WQ), and Employee Productivity (EP). The findings reveal that PC has a strong positive effect on WQ ($\beta = 0.395$, $t = 14.370$, $p < 0.001$), while BC also positively influences WQ ($\beta = 0.269$, $t = 9.707$, $p < 0.001$). Additionally, PC demonstrates a positive but weaker impact on EP ($\beta = 0.100$, $t = 2.547$, $p = 0.011$). Interestingly, BC shows a small negative effect on EP ($\beta = -0.094$, $t = 2.577$, $p = 0.010$), suggesting that certain behavioral aspects may hinder productivity. Moreover, WQ significantly enhances EP ($\beta = 0.476$, $t = 16.268$, $p < 0.001$), highlighting the critical role of workplace quality in improving employee performance. These results underscore the importance of both physical and behavioral workplace factors in shaping workplace quality and productivity outcomes.

Mediation Analysis

Table 8: Mediation Analysis

Hypotheses		Beta Coefficient	S.D.	T statistics	P values	Percentile Bootstrap 95% confidence interval	
						Lower	Upper
H6	PC -> WQ -> EP	0.188	0.017	10.816	0.000	0.156	0.224
H7	BC -> WQ -> EP	0.128	0.014	9.292	0.000	0.101	0.155

The mediation analysis results reveal that Workplace Quality (WQ) significantly mediates the relationships between both the Physical Component (PC) and Employee Productivity (EP), as well as the Behavioral Component (BC) and EP. Specifically, the indirect effect of PC on EP through WQ is positive and statistically significant ($\beta = 0.188$, $p < 0.001$, 95% CI [0.156, 0.224]), suggesting that improvements in the physical work environment enhance workplace quality, which in turn boosts employee productivity. In a similar vein, WQ mediates the relationship between BC and EP, with a significant indirect effect ($\beta = 0.128$, $p < 0.001$, 95% CI [0.101, 0.155]), reflecting that positive behavioral attributes contribute to workplace quality, ultimately improving employee performance. These findings underscore the pivotal role of workplace quality as a key mechanism through which both physical and behavioral factors influence productivity outcomes.

DISCUSSIONS

The findings of this study highlight the significant role of workplace components in influencing workplace quality (WQ) and employee productivity (EP). The results confirm that the Physical Component (PC) has a strong positive impact on WQ. This finding is consistent with the previous studies Lemma et al., (2022) and Almita et al., (2023) suggesting that well-designed physical workspaces contribute to an enhanced work environment. Similarly, the Behavioral Component (BC) positively influences WQ, indicating that employee behaviors and workplace culture are crucial for maintaining a high-quality work environment which is aligned with previous studies, such as (Ahmed et al., 2020) and (Haynes. B. P. 2008). However, while PC positively affects EP (Arata et al., 2025), BC exhibits a slight negative impact on EP. This negative relationship suggests that certain behavioral aspects, such as workplace conflicts or distractions, may hinder productivity that is in line with Myint & Pomsuwan, n.d (2024). Furthermore, WQ is found to be a significant determinant of EP, (Chandani et al., 2016) similar study suggested that reinforcing the idea that a well-maintained and conducive work environment enhances employee efficiency and performance.

The mediation analysis further highlights the indirect effects of PC and BC on EP through WQ. The results indicate that WQ significantly mediates the relationship between PC and EP ($\beta = 0.188$, $p < 0.001$, 95% CI [0.156, 0.224]), emphasizing that a well-structured physical environment enhances workplace quality, which in turn boosts employee productivity. Similarly, WQ also mediates the relationship between BC and EP ($\beta = 0.128$, $p < 0.001$, 95% CI [0.101, 0.155]), demonstrating that positive behavioral attributes can contribute to workplace quality, thereby improving employee performance. These findings highlight the pivotal role of workplace quality as a crucial mechanism through which physical and behavioral factors impact productivity

Conclusion

This study underscores the interconnectedness of physical and behavioural workplace factors in shaping workplace quality and employee productivity. The results emphasize that while physical infrastructure is essential for workplace quality, behavioural aspects also play a crucial role. However, the negative impact of BC on EP suggests that organizations should carefully manage behavioural dynamics to minimize potential disruptions to productivity. Moreover, the strong positive relationship between WQ and EP confirms the importance of fostering a high-quality work environment to optimize employee performance. The mediation results further reinforce the significance of WQ as a key conduit through which PC and BC influence EP, underscoring the necessity of improving workplace quality to enhance productivity outcomes.

Implications for healthcare management

The findings offer valuable insights into business leaders and managers in designing effective workplace strategies. Organizations should invest in improving physical workplace conditions, such as ergonomic office layouts, lighting, and ventilation, to enhance workplace quality. Additionally, behavioral factors should be carefully managed through employee engagement initiatives, effective leadership, and conflict resolution strategies to minimize negative impacts on productivity. Given the strong influence of WQ on EP, businesses should prioritize creating a supportive and comfortable work environment to maximize employee performance and overall organizational efficiency. The mediation results suggest that businesses should focus not only on direct improvements to workplace conditions but also on strategies that enhance WQ as an intermediary factor, thereby amplifying the positive effects on productivity.

Limitations and Future Research Directions

The sample size and the specific healthcare organizational setting have been the major limitation of this study. Therefore, future studies are recommended to expand this study country wide in healthcare organizations. Also, further research may explore the nuanced relationship

between behavioral components and employee productivity by identifying specific behavioral factors that contribute to the observed negative effect. Additionally, longitudinal studies could provide deeper insights into how changes in workplace conditions over time impact WQ and EP. Investigating healthcare specialty and industry-specific variations in these relationships can also offer tailored recommendations for different organizational contexts. Finally, integrating qualitative approaches, such as employee interviews and case studies, could enrich the understanding of underlying workplace dynamics that influence productivity outcomes. Future research should also examine additional mediating or moderating variables that could influence the strength of these relationships, providing a more comprehensive understanding of workplace dynamics and their impact on productivity.

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