

Optimising Administrative Employees' Productivity in XYZ District of Sarawak: The Role of Physical Workspace Environments

Nurul Masturina Maslan¹, Azilah Anis^{1*}, Rafikul Islam²

¹Faculty of Business and Management, Universiti Teknologi MARA, Selangor Branch, Puncak Alam Campus, Selangor, Malaysia,

²Kulliyah of Economics and Management Sciences, International Islamic University Malaysia, Kuala Lumpur, Malaysia

nurulmasturina.rna@gmail.com, azilahanis@uitm.edu.my*, rislam@iiium.edu.my

Abstract: A pleasant physical working environment is essential to prevent unnecessary stress among administrative employees. This is because administrative employees spend most of their working hours within a building or a physical workspace environment. With these routine tasks and the extensive time spent in the workspace, discomfort can easily arise in their productivity and performance. Therefore, this study aims to identify the impact of the physical workspace environment on administrative employees' productivity at XYZ district, Sarawak, by employing four dimensions of the physical workspace environment: temperature, noise level, lighting, and color. This study employs a quantitative methodology, and questionnaires were used to collect the data by utilizing the e-survey. The data was gathered from 81 administrative employees via convenience sampling from private and public organizations located in XYZ district, Sarawak, and analyzed using reliability analysis, descriptive analysis, correlation analysis, and multiple regression analysis. The findings indicate that this study's four dimensions of the physical workspace environment, i.e., temperature, noise level, lighting, and color, have a significant relationship with administrative employees' productivity in XYZ district, Sarawak. The study concludes that organizations can significantly boost the productivity and performance of administrative employees by optimizing the physical workspace environment. It also suggests that organizations should not only aim to create a conducive workspace but also consider the preferences and well-being of their employees. This research contributes to a better understanding of the environmental factors affecting employee productivity and offers practical insights for organizational improvement in physical workspace design.

Keywords: *Employee Productivity, Physical Workspace Environment, Temperature, Noise Level, Lighting, Colour*

1. Background of the study

Productivity refers to the ratio of input to output, reflecting both the benefits and drawbacks this contribution brings to the organization (Tarro et al., 2020). An organization's success is fundamentally linked to the productivity of its employees, which in turn is influenced by their skills, competencies, expertise, and experience, as well as the efficiency with which they perform (Pearl Dlamini et al., 2022). Nonetheless, productivity increases when employees complete their tasks comfortably and satisfactorily. As such, it is the organization's responsibility, as an employer, to ensure that the workspace is comfortable and meets the needs of its employees (Morgan et al., 2021).

Furthermore, administrative employees refer to an individual who offers various forms of administrative support to an organization (Adebayo et al., 2020). The administrative employees' responsibilities include managing correspondence, managing and organizing files, scheduling appointments, and providing support services to other employees (Nuraini et al., 2023). Besides, administrative employees are generally responsible for managing a range of administrative and clerical tasks to ensure the organization operates conveniently and efficiently (Vipin et al., 2021).

Physical workspace environment, on the other hand, refers to tangible elements that can be seen and felt, such as temperature, noise level, lighting, and color. Also, employee satisfaction and encouragement should be prioritized in the physical workspace environment to ensure employees are not overburdened while performing their tasks. Therefore, a well-designed physical workspace environment can increase employees' commitment and satisfaction, which in turn will increase their productivity and efficiency (Najihah et al., 2020). A well-designed physical workspace is important because a physical workspace that fails to provide comfort

and enjoyment for employees while they perform their tasks can lead to several negative impacts on productivity, such as fatigue, stress, and anxiety (Bankins et al., 2021).

Presently, the XYZ district of Sarawak is experiencing a noticeable increase in the number of retrenchments. This number is particularly alarming because it is perceived that physical workspace environments are one of the causes of the high number of retrenchments in the district (Chuong Hock et al., 2022). In addition, Andrew et al. (2022) highlighted that a poor physical workspace environment has a negative cumulative effect on employee productivity. They mentioned that productivity can decrease when the employees are working in an uncomfortable and disengaged workspace environment.

The present study focuses on administrative employees, who typically spend most of their working hours in a building or designated physical workspace, where they are tasked with routine administrative duties (Tran et al., 2023). Abdul Rahman et al. (2023) also highlighted that the repetitive nature of these tasks and the extensive time spent in the workspace can lead to discomfort, directly impacting administrative employees' productivity and overall performance.

Realizing the above scenario, this study thus aims to identify the relationship between the physical workspace environment and administrative employees' productivity in the XYZ district of Sarawak.

2. Literature Review

Employee's Productivity: Previous researchers defined productivity as the degree to which employees are completed to the extent that employees satisfactorily meet the job demands. Productivity can also be defined as the degree to which an economy effectively uses its production inputs, such as labor and capital, to generate a specified amount of output (Miller, 2016).

In terms of organizational operations, productivity is the ratio of an organization's revenue to its employees' costs (Oseland, 2017). The increased productivity can also increase both the functional and organizational performance, as well as the quality of the products or services produced by its employees (Indraswari & Martono, 2020).

It is reported that personal, social, organizational, and environmental significantly influence administrative employees' productivity within the physical workspace environment (Al Horr et al., 2016). However, the present study will only focus on environmental variables to assess the productivity levels of administrative employees.

Physical Workspace Environment: A physical workspace environment is a necessary component of administrative employees' lives that allows them to execute their jobs effectively (Rorong, 2016). In addition, the physical workspace environment is a setting within which administrative tasks are carried out (Hernejoja et al., 2022). It is well-established that there is a positive correlation between this factor and its impact on the organization's productivity (Grant et al., 2019).

The physical workspace environment plays a significant role in administrative employees' productivity. The variables of the physical workspace environment have a significant impact on the administrative employees' productivity, whether they are unfavorable or favorable (Frastika & Franksiska, 2021). In particular, when employees are physically and mentally motivated to work, their productivity will directly improve (Kolpakova et al., 2019). The authors also claimed that a conducive physical workspace environment reduces absenteeism and improves administrative employees' productivity, resulting in a rise in physical workspace productivity. Furthermore, an adjustable and adaptive physical workspace that enables employees to personalize their workspace environment to their personal preferences could potentially improve their satisfaction and productivity (Nnenna Nancy, 2022). Thus, the first hypothesis of the study is:

H1: There is a significant relationship between the physical workplace environment and administrative employees' productivity.

Temperature: Productivity is an extremely reliant state on employees and is influenced by various physical, physiological, and psychological factors (Deng et al., 2020). Therefore, different employees may have varying degrees of temperature sensitivity and preferences. These factors should be taken into consideration so that employees can remain comfortable while remaining productive (Alzahrani et al., 2022).

Since temperature plays a significant influence on the physical workspace environment, having comfortable working conditions can help employees be more productive and feel less stressed (Chang & Kajackaite, 2019). Both excessively high and inadequately low temperatures can hurt administrative employees' productivity, particularly in tasks that require cognitive, physical, and perceptual routines (Tian et al., 2021). Besides, temperatures that are too high will have a direct effect on health and will cause employees to experience heat stress as well as heat exhaustion (Tian et al., 2021). Chang and Kajackaite (2019) clarify that a warmer temperature may be preferable for a thin person. They also emphasize that somebody who is not relatively as thin might benefit more from a lower temperature. Conversely, a less intelligent person can benefit more from a lower temperature.

Melissa (2020) mentioned the significant relationship between temperature and administrative employees' productivity. Specifically, she emphasized that personal preferences in the physical workspace environment, including temperature, will impact the administrative employees' productivity and performance. Therefore, the second hypothesis of the study is:

H1a: There is a significant relationship between temperature and administrative employees' productivity.

Noise Level: Noise level can be defined as undesirable and disturbing sounds, such as talking between co-workers, ringing telephones, sounds from office machinery, and footsteps (Alzahrani et al., 2023). The authors also demonstrated that noise from open-plan layouts and similar situations severely affects administrative employees' productivity. In addition, louder noise can produce physiologic changes, such as an increase in blood pressure (Appel-Meulenbroek et al., 2021). The physical workspace environment, particularly the open-plan layout, is the greatest obstacle for administrative employees because it can negatively affect administrative employees' productivity (Sander et al., 2019). This is possible because an open-plan layout encourages employees within the same building to communicate with each other, which results in focusing more on the conversation rather than their work (Ayoko et al., 2023). The authors also mention that noise perceptions such as telephones ringing and employees' conversations are associated with impaired concentration, reduced task motivation, and overstimulation, which triggers employees' negative reactions to their physical workspace environment.

Unwanted noise from other employees can also cause stress, especially in situations that require other employees to work in noisy environments. Providing private rooms to mitigate this issue is often costly due to the expenses of building partitions (De Salvio et al., 2023). When employees in an open-plan layout are unable to remove themselves from distracting noise, they feel emotionally distracted, as though they have lost their privacy (Hafee et al., 2019). This is because each administrative employee has a sensitivity toward noise levels. Some of them may feel unbothered by the loud noise level. Meanwhile, some of them may feel irritated by the excessive noise level. As such, the third hypothesis of the study is:

H1b: There is a significant relationship between noise levels and administrative employees' productivity.

Lighting: Lighting is required in a physical workspace environment to provide safety and allow all tasks to be completed timely and efficiently (Kumar et al., 2017). Inadequate lighting is also a source of stress, leading to poor administrative employees' productivity when they are exposed to an uncomfortable physical workspace environment characterized by excessive glare, dull, bulk, or a lack of natural light (Galanti et al., 2021).

The effects of lighting on administrative employees' productivity are essentially determined by four factors: source (sunlight, incandescent, fluorescent, and sodium vapor), fixtures (ceiling, desk, and floor lamp), quantity (lighting), and arrangement (Cheung et al., 2021).

According to the findings of Aryani et al. (2020), visual comfort is the most significant factor in achieving administrative employees' productivity in a physical workspace environment in terms of health and

productivity. With sufficient lighting, employees can do their tasks more quickly, with fewer mistakes, accidents, and absenteeism (Carter et al., 2021).

There are significant relationships between lighting and the productivity of administrative employees; insufficient lighting leads to migraines, eyestrain, and decreased work productivity and motivation, increasing error rates and causing stress and sleep problems. Conversely, adequate lighting can reduce discomfort and fatigue, improve concentration, and increase productivity (Cheung et al., 2021). Thus, the fourth hypothesis of the study is:

H1c: There is a significant relationship between lighting and administrative employees' productivity.

Color: Color is one of the most powerful impulses received from the external world that relates to the inner world. The different colors employed in the design of the physical workspace environment generate varied psychological responses in employees (Nolé Fajardo et al., 2023). Consequently, the authors suggested that the presence of a particular color in a physical workspace environment may have an impact on administrative employees' productivity, well-being, and performance.

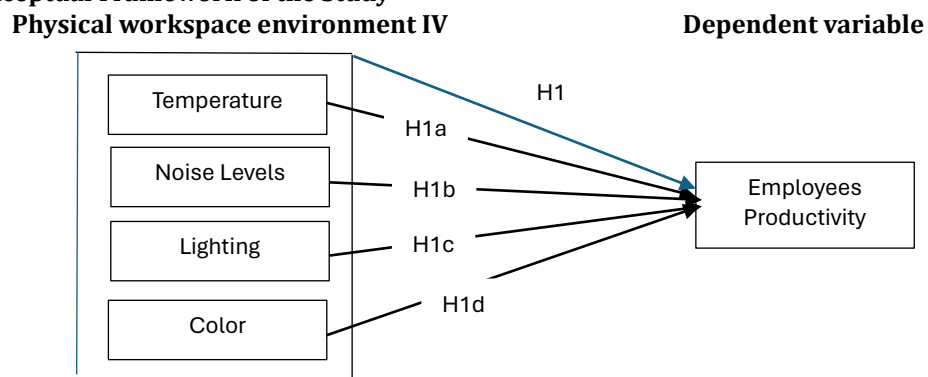
Previous studies compared the impact of red and blue on the mood and productivity of administrative employees. When employees shifted from one color room to another, particularly from blue to red, they made more mistakes while typing for 20 minutes (Ulusoy & Aslanoglu, 2022). In addition, employees considered the white physical workspace environment to be less distracting and preferred it more than the red physical workspace environment (Hughes, 2022). The comparison between green and red physical workspace environments also plays a significant finding in a study by Hughes (2020). The choice of color may have served as a means for administrative employees to cope with environmental stress, thus helping them to maintain focus on their immediate tasks (Orel & Alonso Almeida, 2019).

Different cognitive responses can be stimulated by different colors, and these responses may influence emotional, mental, and even administrative employees' physical health (Savavibool et al., 2018). For example, cool color tones such as blue, green, and purple are related to serenity, peace, and attention. Meanwhile, colors such as red, orange, and yellow are related to vitality, excitement, and activity (Savavibool et al., 2018). Thus, the fifth hypothesis of the study is:

H1d: There is a significant relationship between color and administrative employees' productivity.

Figure 1 below illustrates the conceptual framework of the study.

Figure 1: Conceptual Framework of the Study



3 Research Methodology

This study applies a quantitative approach, which involves collecting and examining numerical data related to administrative employees' productivity in the XYZ district, Sarawak.

Eighty-five respondents were targeted, including the permanent, part-time, and contract administrative employees working in the government and private sector in XYZ district, Sarawak. This minimum number of

respondents is required to reach an acceptable level of statistical significance, which is calculated using G-power. However, 101 responses from 101 respondents were successfully collected via the online survey. Unfortunately, data from twenty respondents were excluded due to invalid responses, making the total sample size eighty-one respondents. Administrative employees were selected for the present study because they can commonly be found throughout the workforce in almost every sector and organization in the XYZ district of Sarawak. Furthermore, administrative employees typically spend most of their working hours in a building or designated physical workspace, where they are tasked with routine administrative duties (Tran et al., 2023). Abdul Rahman et al. (2023) also highlighted that the repetitive nature of these tasks and the extensive time spent in the workspace can lead to discomfort, directly impacting administrative employees' productivity and overall performance.

The respondents were selected via the non-probability sampling technique, which is convenient sampling. Convenience sampling is a non-probability sampling technique in which respondents are chosen by the researcher based on their accessibility and availability (Berndt, 2020). Regarding data collection, this study utilized an online survey distributed to the respondents through Google Forms. The Google Forms link was distributed to several social media platforms such as WhatsApp, Instagram, Telegram, and X (previously known as Twitter). Therefore, the link was only spread to administrative employees who are currently working in the government and private sector. To ensure that only the administrative employees answered the online survey, the researcher contacted the representative from each organization's administrative employees for consent to ensure that the respondents met the criteria of the study.

This study also utilized IBM SPSS as a data analysis tool and applied reliability analysis, descriptive analysis, correlation analysis, and multiple regression analysis to the data. Data analysis is the procedure of examining, filtering, converting, and modeling data to find relevant information, create conclusions, and assist in decision-making (Abdul Aziz et al., 2021).

Demographic Profile of the Respondents: Table 1 exhibits the respondents' demographic profiles for this study. The demographic profile of the study reveals that 44.4% (36 out of 81 respondents) are from 41 – 50 years old, with the majority being female at 66.7% (60 out of 81 respondents). The educational background is mainly comprised of individuals with a bachelor's degree, accounting for 46.9% (38 out of 81 respondents). In terms of employment status, a significant majority, 90.1% (73 out of 81 respondents), are in permanent positions. The sector with the highest representation in government, making up 76.5% (62 out of 81 respondents). Lastly, the most common job level among respondents is that of an administrative clerk, representing 45.7% (37 out of 81 respondents).

Table 1: Demographic Profile of the Respondents

Respondent Profile	Frequency	Percentage
Age		
20 = 30 years old	12	14.8
31 – 40 years old	22	27.2
41 – 50 years old	36	44.4
51 – 60 years old	11	12.6
Gender		
Female	60	66.7
Male	21	23.3
Education Level		
Sijil Pelajaran Malaysia (SPM)	11	13.6
Sijil Tinggi Pelajaran Malaysia (STPM)	9	11.1
Diploma	13	16.0
Bachelor's Degree	38	46.9
Master	10	12.3
Employment Status		
Permanent	73	90.1
Part-Time	3	3.7

Contract	5	6.2
Sector		
Government	62	76.5
Private	19	23.5
Job Level		
Executive	15	18.5
Assistant Manager	8	9.9
Supervisor	10	12.3
Admin Clerk	37	45.7
Support Employee	11	13.6
Type of Workspace		
Open Space	73	90.1
Private Space	8	9.9

4. Findings and Discussion

This section provides an overview of the study's findings and discussion. It aims to determine the relationship between the physical workspace environment and employees' productivity among administrative employees in the XYZ district of Sarawak.

Table 2: Cronbach's Alpha Score for Actual Study (n = 81).

	No. of Items	Cronbach's Alpha	Internal Consistency
Independent Variables			
Temperature	5	.762	Good
Noise Level	4	.806	Very Good
Lighting	5	.725	Good
Color	4	.813	Very Good
Dependent Variable			
Employee Productivity	10	.913	Excellent

The Cronbach's alpha for the dependent variable, namely employees' productivity value in Table 2, was considered excellent as its range was $\alpha = 0.913$. The Cronbach's alpha for independent variables for noise level and color was very good, with $\alpha = 0.806$ and $\alpha = 0.813$, respectively. The Cronbach's alpha for temperature ($\alpha = 0.762$) and lighting ($\alpha = 0.725$) were considered good, falling at the range of 0.7 to 0.8. As a result, it can be said that the Cronbach alpha for dependent and independent variables for the present study was considered reliable and consistent, ensuring the validity of the study.

Table 3 below illustrates the relationship between the physical workspace environment, which encompasses temperature, noise level, lighting, and color, and the productivity of administrative employees.

Hypotheses 1: There is a Significant Relationship between the Physical Workspace Environment and Administrative Employees' Productivity.

Table 3: Pearson Correlation Analysis between Physical Workspace Environment and Employees' Productivity

		Physical Workspace Environment	Employees' productivity
Physical Workspace Environment	Pearson Correlation	1	.731**
	Sig. (2 tailed)		.000

** Correlation is significant at the 0.01 level (2 - tailed).

Table 3 shows the correlation analysis between the physical workspace environment and administrative employees' productivity. The findings show that the physical workspace environment and employees' productivity have a positive significant relationship. The correlation between temperature and administrative employees' productivity was $r= 0.731$, with the significant value being $p=0.000$. Therefore, it exhibits that the physical environment has a strong positive and significant relationship with administrative employees' productivity in the XYZ district of Sarawak.

A friendly and well-planned physical workspace environment fosters positive outcomes, which increases employees' productivity. On the other hand, an unmotivated physical workspace environment can lead to stress, distraction, and discomfort, directly decreasing employee productivity. Thus, it is crucial for organizations that aim to optimize employees' productivity to comprehend the significance of a conducive and pleasant physical workspace environment.

A physical workspace that maintains a comfortable temperature, provides adequate lighting, ensures acceptable noise levels, and features pleasant color schemes can significantly enhance administrative employees' productivity. However, it is crucial to remember that not all dimensions of the physical workspace environment are significant to the employees' productivity. Studies have drawn emphasis on certain disadvantages, such as dehumanization related to specific physical workspace environments (Taskin et al., 2019). For instance, the potential advantages of open-plan and flexible physical workspace environments on employees' productivity did not always occur (Taskin et al., 2019). This is because a poorly designed physical workspace, characterized by discomfort, excessive noise, inadequate lighting, and unappealing color schemes, can negatively impact employees' productivity.

Hypotheses 1a: There is a Significant Relationship between Temperature and Administrative Employees' Productivity.

Table 4: Correlation between Temperature and Administrative Employees' Productivity

	Noise Level	Employee Productivity
Noise Level	Pearson Correlation	1
	Sig. (2 - tailed)	.626**
	N	81

**Correlation is significant at the level 0.01 level (2-tailed).

Table 4 shows the correlation analysis between temperature and employees' productivity. The findings show that temperature and employees' productivity have a significant relationship. The correlation between temperature and administrative employees' productivity was at $r= 0.626$ and a significant value of $p=0.000$. Therefore, it shows that temperature in a physical environment has a moderate positive and significant relationship with administrative employees' productivity in the XYZ district of Sarawak.

Employees who work in hot physical workspace environments are more likely to feel irritated and depressed, while employees who work in cold environments could feel drowsy and have less energy. This is echoed by the findings of Seppanen et al. (2005), who said that employees' productivity increases at temperatures between 21°C and 22°C and decreases at temperatures between 23°C and 24 °C.

On really hot days, employees can be more likely to be absent from work because of the heat stress, which may lead them to be less productive at work (Somanathan et al., 2021). Moreover, productivity decreased because of the temperature discomfort brought on by the hot air (Deng et al., 2020). Additionally, as said by Herdianzah et al. (2023) and Lai et al. (2023), abrupt temperature changes could positively affect employees' productivity and performance.

Hypotheses 1b: There is a Significant Relationship between Noise Level and Administrative Employees' Productivity.

Table 5: Correlation between Noise Level and Administrative Employees' Productivity

	Noise Level	Employee Productivity
Noise Level	Pearson Correlation	1
	Sig. (2 - tailed)	.626**
	N	81

**Correlation is significant at the 0.01 level (2-tailed)

Table 5 displays the analysis of noise level and employees' productivity. The results demonstrate a significant correlation between noise level and administrative employees' productivity, with the correlation at $r = 0.626$ and the significant value at $p = 0.00$. Thus, the study demonstrates a moderate positive and significant relationship between noise level and administrative employees' productivity in the XYZ district of Sarawak.

A controlled noise environment can help to create more focused and productive employees; meanwhile, excessive or disruptive noise in the working environment could cause employees to take longer time to complete their tasks and reduce their productivity. Besides, employees who are exposed to high noise levels regularly may experience stress and fatigue. This is because high stress levels have been related to the lower level of employees' productivity. The study's finding is similar to the findings of numerous studies showing that noise adversely affects employees' productivity, indicating that the volume and quality of unwanted noise can significantly hinder employees' performance (Simion et al., 2022).

In the physical workspace environment, noise levels that are too high can negatively affect employees, causing physical symptoms, including high blood pressure and stress related to work (Alfiah Aras et al., 2023). Furthermore, in an open-plan layout, noise sources, including those unrelated to work conversation, machine noise, and phone ringing, can decrease employees' productivity (Felipe et al. et al., 2023). Also, employees with high noise sensitivity are more likely to experience discomfort, stress, or loss of concentration in noisy environments, which can negatively affect their productivity.

Hypotheses 1c: There is a Significant Relationship between Lighting and Administrative Employees' Productivity.

Table 6: Correlation between Lighting and Administrative Employees' Productivity

	Lighting	Employees' productivity
Lighting	Pearson Correlation	1
	Sig. (2 - tailed)	.513**
	N	81

**Correlation is significant at the 0.01 level (2-tailed).

Table 6 illustrates the analysis of the correlation between lighting and administrative employees' productivity. The findings show a significant correlation between lighting and employees' productivity, with a correlation value of $r = 0.513$ and a significant value of $p = 0.000$. Hence, the present study can conclude that lighting has a moderate positive and significant relationship with administrative employees' productivity in the XYZ district of Sarawak. This data is parallel with what is discovered by Zeng et al. (2023), who found that lighting in a physical workspace environment can enhance employees' productivity, particularly for tasks such as reviewing documents on paper or typing a report on the computer (Zeng et al., 2023).

Insufficient lighting can cause discomfort and eyestrain, resulting in a decrease in employees' productivity. Meanwhile, adequate lighting can improve mood and focus, thereby increasing employees' productivity. This is because inconvenient glare from excessively bright lighting or poorly physical workspace environment light sources can cause discomfort and reduce employees' visibility. Furthermore, gloomy or unbalanced lighting can increase tension and exhaustion of the employees, while bright or well-balanced lighting is frequently related to positive feelings, and both lighting conditions can impact employees' productivity (Nolé Fajardo et al., 2023).

Poor lighting in a physical workspace environment can cause psychological and emotional discomfort in employees, leading to errors and a decrease in the quality of work. In this situation, employees may neglect to see the details on the documents and make mistakes due to the difficulties that they have in completing their tasks (Anao & Edene, 2023).

Hypotheses 1d: There is a Significant Relationship between Color and Administrative Employees' Productivity.

Table 7: Correlation between Color and Administrative Employees' Productivity

	Color	Employees' productivity
Color	Pearson Correlation	.686**
	Sig. (2 - tailed)	.000
	N	81

**Correlation is significant at the 0.01 level (2 - tailed).

Table 7 shows the analysis of the correlation between color and administrative employees' productivity. The findings demonstrated a significant correlation between color and administrative employees' productivity, with a correlation value of $r = 0.686$ and a significant value of 0.000 . Therefore, the study revealed a significant moderate positive correlation between color and administrative employees' productivity in the XYZ district of Sarawak.

The data exhibited in Table 6 is aligned with the findings of Jain and Nayak (2023) as well as Amani et al. (2020). They discovered that enhancing color conditions in the physical workspace environment boosts employees' creativity, performance, and productivity.

Cool tones, such as blue and green, are frequently related to a serene and calm mood. These colors can create a calming physical workspace environment that encourages concentration and increases employee productivity. Besides, employees who are exposed to cool tones of color can reduce their stress levels and do their work in a peaceful environment, thereby boosting their productivity. Meanwhile, warm tones, such as red and yellow, can increase employees' energy and motivation to do their tasks better.

Table 8: R Squared Analysis of the Study

Model	R	R Square	Adjusted R Square	1. Error of the Estimate
1	.751 ^a	.564	.541	.36749

a. Predictors: (Constant), Temperature, Noise Level, Lighting, Colour

b. Dependent Variables: Employees' productivity

Table 9: Multiple Regression Analysis of the Physical Workspace Environment

Model		Unstandardized Coefficient B	Standard Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.657	.341		1.923	.058
	Temperature	.102	.089	.123	1.143	.257
	Noise Level	.218	.106	.235	2.057	.043
	Lighting	.109	.082	.124	1.318	.191
	Color	.430	.106	.414	4.041	.000

a. Dependent Variable: Employees' productivity. The coefficient is significant at the level $p > 0.05$.

As shown in Table 8, this study identifies the most influential variable of the physical workspace environment that influences employees' productivity. Data in Table 7 exhibits that the most influential variable that has an impact on administrative employees' productivity in the XYZ district of Sarawak is color, with a beta value of 0.430 and a significant value of 0.000 . This finding proves that different colors could bring different emotional

responses to administrative employees at XYZ district of Sarawak. Hence, choosing a color for a particular physical workspace environment that matches the desired psychological could impact administrative employees' behavior and productivity.

This finding is echoed by Bajaj et al. (2022), who emphasize the importance of balancing employee efficiency with visual appeal through color. It is essential to consider the nature of work conducted in the physical workspace environment and the desired productivity levels. As cited by Obuba (2023), employing color must be approached with caution, as excessive use can be distracting and may diminish productivity among administrative employees.

5. Managerial Implications and Recommendations

The study's findings revealed a correlation between the physical workspace environment and productivity among administrative employees in the XYZ district of Sarawak. The physical workspace environment, which encompasses temperature, noise level, lighting, and colors, significantly impacts employees' productivity and is critical to many aspects of organizational performance.

Therefore, the study recommends that managers maintain a comfortable temperature and ensure that heating, ventilation, and air conditioning (HVAC) systems are routinely maintained. Employers need to provide personal space for heaters or fans so that administrative employees can adjust the temperature in their physical workspace according to their preferences.

In addition, department managers must provide a quiet working space for the administrative employees so they can concentrate on completing their tasks. Alternatively, they can provide soundproof equipment or headphones with noise cancellation so the administrative employees can manage the disruptive noise independently. To optimize natural light, such as sunlight intake, managers must physically relocate their workspace to be closed to the windows by using transparent or translucent curtain materials.

When establishing color schemes that complement the tastes and cultural backgrounds of administrative employees, managers must take into account the nature of the physical workspace environment. The influence of color on employees' productivity is profound, as it can significantly affect mood, energy levels, and psychological comfort, all of which are critical to optimizing work output. Consequently, the findings of the study show that selecting the right palette is paramount as the most suitable element, which could enhance focus, reduce fatigue, and stimulate creativity, thereby becoming the most influential element in boosting administrative employees' productivity at the XYZ district of Sarawak.

Besides, for future study recommendations, it is suggested that a qualitative study be conducted on how temperature, noise level, lighting, and color could affect employees' productivity. The goal is to identify how these elements interact and impact one another in a practical physical workspace environment. Also, future studies can examine the possible advantages of a physical environment for work that is personalized or adaptable. Future studies may also examine how adjusting temperature, noise level, lighting, and color to personal preferences can increase employees' productivity and general well-being.

Conclusion

Productive teamwork, stress reduction, and overall well-being are all enhanced by a comfortable and motivating physical workspace environment. Furthermore, a well-planned physical workspace can enhance productivity by reducing external distractions and enhancing their focus. Employers who invest in creating an appealing physical workspace environment can probably expect to improve productivity in the long term and increase employee retention and satisfaction. Nevertheless, there is a lack of doubt about the impact that a physical workspace environment has, particularly on the productivity of administrative employees. This study thus aims to identify the relationship between the workspace environment and employees' productivity among administrative employees in the district of XYZ of Sarawak.

The findings of the study reveal that the physical workspace environment, which includes temperature, noise level, lighting, and color, was found to be significantly correlated with employees' productivity in the district of

XYZ of Sarawak. Additionally, for all the variables of the physical workspace environment utilized in this study, color was the most influential variable impacting the productivity of administrative employees in the said district. The study concludes that organizations can significantly boost the productivity and performance of administrative employees by optimizing the physical workspace environment. It suggests that organizations should not only aim to create a conducive workspace but also consider the preferences and well-being of their employees in these environments.

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