

## The impact of Physical environment on employees' performance- A case of garment sector in Sri Lanka

W.D.M.T.H. Premarathne<sup>1</sup>, Dr. U.W.M.R. Sampath Kappagoda<sup>2</sup>

<sup>1</sup>Graduate, Faculty of Management Studies, Rajarata University of Sri Lanka, Mihintale, Sri Lanka

<sup>2</sup>Senior Lecturer, Faculty of Management Studies, Rajarata University of Sri Lanka, Mihintale, Sri Lanka

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### **Abstract:**

**Background:** The overall performance of the apparel industry is largely depend on the job performance of the employees. There are many factors influencing the job performance of the employees. Amongst them, working environment is one of the important factors. However, it was observed that there are not enough studies carried out to examine the impact of physical working environment on job performance of employees in Sri Lankan garment industry. Therefore, this study aims to examine the impact of physical working environment on job performance of employees.

**Materials and Methods:** The sample was randomly selected 150 apparel sector employees in Anuradhapura district in Sri Lanka. The data was collected using a structured questionnaire. Univariate, bivariate and multivariate methods of data analysis were used in the data analysis. The analysis was done using the SPSS. The hypotheses were tested using the regression analysis.

**Results:** The descriptive data revealed that the physical working environment is not conducive in selected apparel sector organizations. Moreover, the results revealed that physical working environment and its sub factors have significantly and positively affected on employees' job performance.

**Conclusion:** The managers need to satisfy the employees with better working condition to get the maximum from their employees.

**Key Word:** Ventilation; Temperature; Noise; Interior infrastructure; Lighting; Job performance; Physical working environment

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### **I. Introduction**

The Apparel industry is the largest export industry in Sri Lanka and it is the highest contributor in gross domestic production of Sri Lankan economy. It is highly labour intensive industry and the performance of this sector is largely depend on the job performance of the employees. Job performance is a very significant factor affecting profitability of an organization (Bevan, 2012). Poor job performance will bring about a tragedy to the organization as associated with lower productivity, profitability and impairment of overall organizational effectiveness (Okoyo&Ezejiolor, 2013; Pepple, Akpan&Edem, 2017). However, it was observed that there are not enough studies carried out to know the job performance of employees in Sri Lankan garment industry (Gunapalan&Ekanayake, 2019).

There are many factors influencing the job performance of the employees. Amongst them, working environment is one of the important factors. Office employees spend most of their time inside the buildings in which they work in, therefore workplace is important to develop a good and healthy working environment (Kamarulzaman et al. 2011). Work environment involves all the aspects which act and react on the body and mind of an employee. Those who are working under inconvenient will most probably engage with low performance and end up with occupational issues such as absenteeism (Leblebici, 2012). The effective work environment encourages the happier employee with their job tasks that ultimately influences the growth of an organization. Therefore, the employees should be satisfied with the working environment to get the maximum from the employees. Otherwise managers can't expect good performance from the employees.

Apparel sector employees spend more and more time within their working environment than the other organizational employees. However, Most industries have an unsafe workplace environment and are most time unhealthy too (Pepple, Akpan&Edem, 2017). In developing countries, most of the workplace environment in industries is insecure and harmful. (Hafeezi, Yingiuni, Hafeezi, Mansoori&Rehman, 2019). These includes poorly designed workstations, unsuitable furniture, lack of ventilation, inappropriate lighting, excessive noise, insufficient safety measures in fire emergencies and lack of personal protective equipment (Chandrasekar, 2011). High proportion of garment industry employees and the negative working conditions effect for low performances (Hancock, Carastathis, & Georgi, 2015).

To the best of the researchers' knowledge, it is hard to find any research on the impact of physical working environment on job performance of the employees in apparel sector in Anuradhapura, Sri Lanka. To fill this research gap, the researchers examine the impact of physical working environment on job performance of the apparel sector employees. Therefore, the current study has two goals; 1) to examine the impact of Physical environment on job performance, 2) to examine the impact of each dimension of physical working environment on employee' performance.

## **II. Literature Review**

### **Job performance**

Job performance of employees is an important issue for any organization and refers to whether an employee does his job well or not. Historically the definition of this construct has proved difficult, as over the last few decades, new conceptualisations of job performance, that facilitates generalisable definitions and taxonomies, have emerged. Motowidlo, (2003) defines job performance as "the total expected value to the organisation of the discrete behavioural episodes that an individual carries out over a standard period of time". According to Moorhead and Griffin (1999), job performance consists of all the total sets of work related behaviours that the organisation expects from the individuals to display. Motowidlo, Borman&Schmit (1997) defines job performance as behaviours or activities that are oriented towards the organisation's goals and objectives. Among the different dimensions of job performance, task performance and contextual performance have been identified as important dimensions (Motowidlo, Borman, & Schmit, 1997). Task performance refers to behaviors that are role prescribed, distinguish one job from another, and contribute to the technical core of the organization (Borman& Motowidlo, 1993; Campbell, McCloy, Oppler, & Sager, 1993). Borman& Brush (1993), defines contextual performance as the behaviour that can be used to stimulate task activities and processes so as to shape the organisational, social and psychological context.

According to the previous research findings, many factors could affect employee's job performance including physical work environment, equipment, meaningful work, performance expectation, and feedback on performance, reward for good or bad system, standard operating procedures, knowledge, skills and attitudes (Stup, 2003). However, the physical work environment has been widely study since it contributed a considerable concern on the employee's job performance.

### **Working environment**

According to Sedarmayanti (2003), a decent working environment is a condition where individuals can do their jobs in an ideal, secure, healthy, and comfort way (Wibowo, Indratjahyo&Saragih, 2018). The working environment is the immediate surrounding where the employees are performing their duties efficiently and effectively. It is one of the key determinants of work quality of employees and their job performance. Unpleasant working environment make the workplace unsafe and hinder their performance. Hence, employees expect hazards free environment to perform their duties. Office environment positively affects the behaviour of individual employees (Hafeezi et al. 2019). Thus, the excellence of working environment act as an essential function in determining the level of employee and worker motivation, productivity, and performance (Sharma, Dhar, &Tyagi, 2016). Unfortunately, most of the managers do not spend much on working environment and they consider it as an extra cost to the organization (Marshelle& Wendy, 1996).

Among the different kind of working environments, the most of the previous research considered physical environment for their research. Amir (2010) has stated that a physical workplace is an area in an organization that is being arranged so that the goal of the company could be achieved. Previous researchers found that, several environmental factors such as noise, colour, lighting, temperature, air quality, workplace design and use of indoor plants (Hafeezi et al. 2019); furniture design, ventilation, noise, light, supervisor support, workspace, communication, fire safety measures (Eberendu, Akpan, Ubani, &Ahaiwe, 2018) as the physical environmental factors. As indicated by Atmojo (2015), some of the factors that influence the workplace include: cleanliness, water, lighting, colouring, security and music.

### **Physical environment and job performance**

Khoso, Kazi, Ahmedani, Muneer, & Khoso (2016) found a positive relationship between physical environment and job performance with their sample of the employees of private hospitals of Hyderabad. Similar result was found by Chandrasekar (2011); Kamarulzaman et al. (2011). Khan, Mariyum, Pasha &Hasnain (2011)) investigated the impact of workplace environment and infrastructure on employees' performance in the education sector in Pakistan and found that incentives at workplace had a positive impact on employees' performance. According to the Vischer (2007), physical work environment is one of the most important factor which influences on work performance. Al-Omari &Okasheh (2017) investigated the influence of physical environment on job performance. They used 85 employees in Engineering company in Jordan and findings revealed that the situational constrains constituted of factors such as noise, office furniture, ventilation and light,

are the major work environment conditions that have negative impact on job performance. Hence the following hypothesis is suggested:

- H1:** physical organizational environment has positive impact on job performances
- H1<sub>a</sub>: ventilation has positive impact on job performances.
- H1<sub>b</sub>: temperature has positive impact on job performances
- H1<sub>c</sub>: noise has positive impact on job performances
- H1<sub>d</sub>: interior infrastructure has positive impact on job performances
- H1<sub>e</sub>: lighting has positive impact on job performances

### III. Material And Methods

#### The Research Design

In this study, the researchers examine the impact of physical environment and job performance of employees in apparel sector in Anuradhapura district. Therefore, the purpose of this study is hypothesis testing. The current study employed a correlational study in order to explore the relationship between physical environment and job performance of employees. This field study is conducted in natural environment in apparel sector under minimal interference with non-contrived settings. This study is a cross sectional study. For this purpose, data were collected from employees of apparel sector in Anuradhapura District in Sri Lanka. Therefore, the unit of analysis of this research is "individual".

#### Sample

The sample of this study was randomly selected 150 employees of the apparel sector in Anuradhapura district in Sri Lanka. In terms of demographics, there were more female employees (64%) than male employees. 53% employees were married. The majority of employees (81%) were less than 35 years of age. The majority of employees (90%) had less than 05 years of work experience.

#### Measures

Two variables in the research: Physical environment and job performance were measured through standard questionnaires with five -point Likert scales, ranging from 1(strongly disagree) to 5(strongly agree). The level of physical environmental condition and job performance of employees were evaluated by themselves. Job performance was measured using task performance and contextual performance through a standard questionnaire consisting 10 statements. Ventilation, temperature, noise, interior infrastructure and lighting were the dimension of physical environment. 19 statements were included in the physical environment questionnaire. The Cronbach's alpha for physical working environment and job performance instruments were 0.873 and 0.931 respectively.

#### Statistical analysis

Data for this study was entered into the application package SPSS after which Descriptive and Inferential Statistics were obtained. Descriptive statistics such as maximum, minimum, means, standard deviations, and variance were obtained. Inferential statistics employed Pearson correlation coefficient and multiple regression analysis. The multiple regression models were adopted

### IV. Result

#### Descriptive statistics

The Table 1 depicts the results of descriptive statistics. According to the data, the mean values for physical working environment, its sub variables; ventilation, temperature, noise, interior infrastructure and lighting are less than 3. And also the mean value for job performance is less than 3. It indicates that the employees are not satisfied with the physical environmental conditions and their performance is not in the satisfactory level.

**Table 1:** Descriptive statistics for variables

Variable	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Std. Error
Ventilation	2.7450	0.90032	0.006	0.241
Temperature	2.6700	0.87681	0.095	0.241
Noise	2.7550	0.91424	-0.031	0.241
Interior infrastructure	2.8933	0.74442	-0.182	0.241
Lighting	2.8000	0.89893	-0.092	0.241
Physical working conditions	2.7836	0.67597	0.167	0.241
Job performance	2.6980	0.84590	-0.181	0.241

### Correlation Analysis

The table 2 depicts the results of the Pearson's Correlation Coefficient between independent and dependent variables. The correlation between physical working condition, its dimensions and job performance were significant and positive.

**Table 2:** Correlations between variables

	V	T	N	II	L	PWE	P
Ventilation (V)	-						
Temperature (T)	.497**	-					
Noise (N)	.994**	.503**	-				
Interior Infrastructure (II)	.522**	.412**	.525**	-			
Lighting (L)	.495**	.499**	.477**	.411**	-		
Physical Working Conditions (PWC)	.880**	.724**	.878**	.752**	.720**	-	
Job Performance	.660**	.536**	.670**	.614**	.428**	.739**	-

\*.Correlation is significant at the 0.05 level (1-tailed)

\*\* .Correlation is significant at the 0.01 level (1-tailed)

### Regression Analysis

**Table 3:** The results of regression analysis

Adj. R <sup>2</sup> =0.541		F Value =117.753		Sig F = 0.000	
Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.125	.244		.510	.611
Ventilation	.620	.071	.660	8.693	.000
Temperature	.517	.082	.536	6.280	.000
Noise	.620	.069	.670	8.936	.000
Interior infrastructure	.698	.091	.614	7.701	.000
Lighting	.403	.086	.428	4.686	.000

According to the Table 3, R<sup>2</sup> value is 0.541. It indicates that predictor variables for the test have ability to explain 54.1% variation of the dependent variable. F value is 117.753 with a p = 0.000. Moreover, the data revealed that ventilation ( $\beta = .620$ ,  $p < 0.01$ ), temperature ( $\beta = .517$ ,  $p < 0.01$ ), noise ( $\beta = .620$ ,  $p < 0.01$ ), interior infrastructure ( $\beta = .688$ ,  $p < 0.01$ ), and lighting ( $\beta = .403$ ,  $p < 0.01$ ) have significantly and positively impact on job performance of the employees.

### V. Discussion

The objective of this research was twofold 1) to examine the impact of Physical environment on job performance, 2) to examine the impact of each dimension of physical working environment on employee' performance. The data revealed that ventilation ( $\beta = .620$ ,  $p < 0.01$ ) has significantly and positively impact on job performance of the employees. Therefore, H1a can be accepted. The temperature has positive impact on job performance was the second hypothesis. It can be accepted ( $\beta = .517$ ,  $p < 0.01$ ). The impact of noise on job performance was significant and positive ( $\beta = .620$ ,  $p < 0.01$ ). Therefore, H1c can be accepted. The data was supported for accept the H1d (interior infrastructure,  $\beta = .688$ ,  $p < 0.01$ ). The lighting ( $\beta = .403$ ,  $p < 0.01$ ) have significantly and positively impact on job performance of the employees. Thus, H1e can be accepted. The impact of physical working environment was the main hypothesis of this research. Since all the sub dimensions of physical environment have significant and positive impact on job performance, the H1 can be accepted. These findings were in line with the findings of previous researchers (Khosro et al.2016; Al-Omari & Okasheh, 2017). However, the physical working condition of the apparel sector in Anuradhapura district is not conducive and the level of job performance is not in the satisfactory level.

### VI. Conclusion

The physical environment of the apparel sector organizations is significantly and positively correlated with the employees' job performance. Therefore, the managers need to satisfy the employees providing better working condition to get the maximum from their employees.

## VII. Limitation and further research

Like any research, this research study has several limitations. First, this study was relying on self-reported data. The level of job performance of employees were measured according to their own attitudes. In future research obtaining data using supervisory rated measures will be benefited. Second, in this research the direct impact of physical environment on job performance was examined. It is suggested to examine the potential mediators and moderators in future research. In closing, the sample was collected from the employees who are working in selected apparel sector organizations in Anuradhapura district in Sri Lanka. This selection may limit the generalizability of the findings. The future researchers can expand the sample to the other districts or provinces.

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