UNIVERSITY OF CAPE COAST

IMPACT OF PHYSICAL WORK ENVIRONMENT ON PERFORMANCE AMONG TEACHERS IN EFUTU CIRCUIT OF CAPE COAST METROPOLIS

BY

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DECLARATION

Candidate's Declaration

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature …… Date……..

Name: …….

Supervisor's Declaration

I hereby declare that the preparation and presentation of the dissertation was supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Supervisor's signature …… Date ……

Name: ……..

ABSTRACT

Physical work environment is regarded as one of the key components of employees work environment. Thus, the physical environment affects how employees, including teachers interact and perform tasks. The study was conducted primarily to find out the impact of physical environment on performance among teachers in Efutu Circuit of Cape Coast Metropolis. The study targeted teachers in Efutu Circuit of Cape Coast Metropolis. Descriptive research design, backed by quantitative research approach, was employed to survey 193 teachers in Efutu Circuit of Cape Coast Metropolis. 130 respondents were selected through simple random sampling and surveyed through the administration of structured questionnaires. A Cronbach;s alpha of 0.800 was recorded for the internal consistency of the instrument. Inferential and descriptive statistics were used for the data analysis. Data processing was conducted through the Statistical Package for Social Sciences (Version 24.0) software. It was discovered that majority of the respondents indicated that the nature of their overall physical work environment was good. Multiple regression was applied to assess the effect of physical work environment on teachers' performance. Infrastructure conditions, lighting conditions, ventilation and noise jointly accounted for a statistically significant weak correlation with teachers' performance at Efutu Circuit of Cape Coast Metropolis. The study recommended that management of schools in Efutu Circuit of Cape Coast Metropolis should continue to use those physical work environment indicators to improve and sustain the performance of teachers at the workplace since it causes a positive variance in teachers' performance.

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DEDICATION

To my mother. Patience Yaa Kumi and my brother, Reginald Senyo Ziadzor

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CHAPTER ONE

INTRODUCTION

Introduction

The workplace environment is the most essential factor in keeping employees upbeat while simultaneously improving their performance (Mike, 2010). This has made present working environment extraordinary, different, diverse, and dynamic. As part of the working environment of employees, including that of teachers, lies the physical environment which affects how teachers in educational institutions interact and perform tasks (Ajala, 2012). Physical environment as an aspect of the work environment has directly affected human sense and subtly changes interpersonal interactions and productivity (Dardeer, Tag-Eldeen & Salem, 2017).

In this regard, the onus lies on educational institutions to ensure that teachers enjoy their work by providing them with a good and satisfactory physical work environment. Indispensable features like office layout, ample lighting conditions, temperature, existence of windows, free air movement suggest that the physical environment influence employees' attitude, behaviours, performance and productivity (Huges, 2007). While other studies like Nanzushi, (2015) have focused their attention on other motivational factor (money, promotion etc.) which influences teachers' performance, this study however, looks at physical work environment and its effect on teachers' job performance.

Background to the Study

Over the past few decades, working environment has been a subject of growing interest for researchers in the domain of organisations, including

educational institutions. This, according to Manu (2016), is primarily due to the fact that humans are affected by certain activities around their habitat, especially their working environment. The work environment can be identified as the professional and social environment in which a person interacts and works with a number of people. Nakpodia (2011), p.48 avers that work environment is the "totality of conditions under which a person or a group of persons work or perform his or her duties". Furthermore, Nakpodia (2011), indicates that it can be in the form of physical environment, human environment and relationship with colleagues and administrators, interactions within the system and the general aura of the work climate.

As aforementioned, physical environment is one of the core components of employees working environment. Oswald (2012) describes the physical work environment as the type of working environment which is made up of elements that relates to the office occupiers' ability to physically connect with their office environment. The physical work environment can also be known as an ergonomic workplace (Bushiri, 2014). There are several factors related to the physical working environment of employees, and that of teachers is no exception. It includes infrastructural facilities like staff office, school building, laboratories, appropriate lighting, ergonomic furniture and rooms designed for meetings and collaborative work, availability of working with tools, office layout, and noise free environment (Leather, Zarola & Santos, 2010; Nakpodia, 2011; Dardeer, Tag-Eldeen & Salem, 2017).

Employees encounter several challenges when working in poor physical working environment. Vischer (2007) claims that when physical factors in the workplace are poor or overcrowding, it leads to negative

consequences or common types of accidents like tripping or striking against objects. Bushiri (2014) also indicates that noise at the work place leads to employee discomfort, and thus reduces the employees' performance. Rantanen (2013) further opines that working in a poor physical environment can lead to different health problems, disaffection, and a fall in employees' productivity. Rantanen's opinion is supported by the Herzberg's two factor theory that specifies that hygienic factors are necessary to maintain a realistic satisfaction level among employees and can also leads to dissatisfaction which may affect the performance level of employees (Huling, 2003). It can therefore be deduced that, having a good physical environment is a necessary and sufficient condition to ensure that employees give off superior job performance.

Performance is an important ingredient for the survival and effective functioning of all institutions. Parallel to this assertion, several researchers (Namuddu, 2010; Khan & Mansoor, 2013; Awan & Asghar, 2014) assert that performance of teachers is critical for the continuous existence and success of the quality of any educational system. Performance is defined "as the achievement of specified tasks against predetermined or identified standards of accuracy, completeness, cost and speed" (Sultana, Irum, Ahmed, & Mehmood 2012). Teacher's performance is thus explained as the duties performed by a teacher at a particular period in the school system in achieving organisational goals (Obilade, 1999, as cited in Wachira, Gitumu, & Mbugua, 2017)

There are several factors that affect teachers' performance. These factors include ventilation, classroom environment, office layout, teaching methodology, general mental ability, personal characteristics, effectiveness in

presenting subject matters, relations with other staff, interactions with students, teaching competence demonstrated, fairness in grading and teachers' attitude toward the students, teaching techniques, preparation and planning, and subject mastery (Bennell & Akyeampong, 2007 ; Nwosu 2014)

Studies have examined the effect of physical work environment on employees' performance, including the performance of teachers. For instance, Tetteh, Asiedu, Odei, Bright-Afful, and Akwaboah (2012) disclosed that there is a direct link between work environment (both physical and behavioral environment) on employees' performance, in that, a good working environment causes employees to give off superior performance. Tetteh, Asiedu, Odei, Bright-Afful, and Akwaboah's opinion is supported by the affective events theory that stipulates that positive-inducing and negative emotional incidents at work have significant psychological effect on employee performance (Phua, 2012).

Naharuddin and Sadegi (2013) further revealed that when employees have a good physical environment, their performance outcomes increase. Garba and Muhammad (2017) highlighted that teachers' performances are very vital such that poor performance and quality of teaching are influenced by poor physical environment.

Statement of the Problem

Teacher's performance is an integral element and the most important aspect of achieving quality education in both developed and developing countries. In tandem with this claim, several researchers (Ochwo, 2013; Akpanobong & Asuquo, 2015; Muthoni & Wafula, 2016) opine that a

teacher's performance is still critical in most developing countries that are implementing universal primary education yet the quality of an education system depends on the performance of its teachers. Sirisha and Sarkar (2015) further contend that organizations, including educational institutions succeed or fail, based on the quality and effectiveness of their workers. Therefore, education outcomes depend on the quality and effectiveness of the teachers.

In spite of the available evidence, it seems that the creation of a safe and healthy physical and psychosocial work environment has not been high on the agenda of employers in the educational sector in Ghana. Physical and psychosocial risks are known as a key public health challenge in developed economies to the extent ample data on the negative impact of harmful physical and psychosocial work conditions are available (Kortum, Leka & Cox, 2010). However, in developing countries including Ghana little or no empirical research data exist on the nature of physical and psychosocial environment and their satisfaction implications on various sectors of the economy including the educational sector. This makes it difficult to ascertain accurate estimate of the economic, health and social consequences of physical and psychosocial work-related stress.

Nevertheless, anecdotal evidence abounds to show that teachers in the Efutu circuit are working in deleterious physical and psychosocial conditions and continue to complain about their satisfaction (Asumeng, Acquah-Coleman & Dadzie, 2015). Along with these difficulties, there is a lack of awareness of workplace environment risk factors, work-related stress as well as workplace violence and harassment. There is also a scarcity of resources to cope and manage them (WHO, 2007). The process of globalization and the changing

nature of work allow workplace environmental risk factors in the banking sector to continue to rear their ugly heads. It is therefore crucial to effectively manage physical and psychosocial hazards especially in the teaching field. Therefore, in an attempt to fill this research gap, this study is to identify the impact of physical work environment on performance of teachers in Efutu Circuit of Cape Coast Metropolis.

Purpose of the Study

The purpose of this study is to find out the impact of physical work environment on performance among teachers in Efutu Circuit of Cape Coast Metropolis.

Research Objectives

The following specific research objectives was be pursued:

1. to assess the nature of physical work environment of schools in the Efutu Circuit of Cape Coast Metropolis
2. to examine the effect of physical work environment on teacher's performance
3. to identify the challenges of working in a physical working environment

Research Questions

Based on the specific research objectives, the following research questions were pursued.

1. What is the nature of physical work environment of schools in the Efutu Circuit of Cape Coast Metropolis?
2. What is the effect of physical work environment on teacher's performance?
3. What are the challenges of working in a physical working environment?

Research Hypotheses

The following research hypotheses were formulated for testing.

H_1: There is a significant positive relationship between infrastructure and teachers' performance

H_2: There is a significant positive relationship between lighting and teachers' performance

H_3: There is a significant positive relationship between ventilation and teachers' performance

H_4: There is a negative relationship between noise and teachers' performance

Significance of the Study

The findings of the study will be of immense benefit to various identified stakeholders. The results of the study will inform key stake holders in education such as head teachers, circuit supervisors, human resource managers and education directors among others on the impact physical work

environment has on the performance of teachers in educational institutions. This will enable the stakeholders to identify factors that can be put in place to minimize or eradicate the impact physical work environment has on the performance of workers especially teachers in schools under (GES).

This will provide an enabling and conducive environment for teachers. With these conditions in place, teachers would be fulfilled working to improve performance which will transcend to pupils to also improve. Additionally, the findings of this study will contribute to the knowledge base on the concepts physical work environment has on teacher's performance, and further provide same, new or different findings alongside the already existing literature. Students, researchers and other academicians could rely on the findings of this study by exploiting the gaps to conduct further studies.

Delimitations of the Study

The research seeks to find out the impact of physical work environment on performance among teachers in Efutu Circuit of Cape Coast Metropolis. The study was conducted in the Cape Coast Metropolis, in the Central region of Ghana. Descriptive research design was used and questionnaire was the main data collection instrument. A target population of 13 Basic schools in the Efutu circuit. The population consist of 193 teachers (139 female teachers and 54 males). Out of this, a sample size of 130 from Efutu Circuit of Cape Coast Metropolis was surveyed. The choice of the sample size was based on the Population-Sample formula designed by Slovin (1973), which serves as a guide in sample selection in Social Science Research. Respondents were selected through simple random sampling

technique and data was analyzed through the use of Statistical Package for Social Sciences (SPSS version 22.0).

Limitations of the Study

It would have been appropriate to conduct the study in all schools under Ghana Education Service (GES) in the Cape Coast Metropolis. However, due resource constraints (time, money etc), the study would be narrowed down to Schools (Basic schools) in Efutu Circuit of the Cape Coast Metropolis.

The study was also limited to the quantitative research approach although it could have been appropriate to use a mixed research approach (where both quantitative and qualitative techniques could be employed). The mixed research approach would have allowed the researcher to conduct interviews to augment the quantitative data. Even though there is limitation in carrying out this study, these shortfalls will not hamper the credibility of the information therein contained to any marked degree.

Definition of Terms

Working Environment: It can be defined as the environment in which people work that include physical setting, job profile, culture and market condition (Tripathi, 2014).

Physical Work Environment: The type of working environment which is made up of elements that relates to the office occupiers' ability to physically connect with their office environment (Oswald, 2012).

Teacher's Performance: Teachers' performance is the duties performed by a teacher at a particular period in the school system in achieving organisational goals (Obilade, 1999).

Organization of the Study

This research comprises of five (5) main chapters and each chapter focuses on a particular aspect of the research document. The chapter one deals with the Introduction of the study, background, statement of the problem, purpose of the study, research objectives and research questions, significance of the study, delimitations, limitations, and the organisation of the study. The chapter two handles the literature review. This re-examines the theories, models, write- ups, and existing literature pertinent to the topic. The chapter three covers the research methodology. It deals with the research design, the study area, the population, sampling procedure, data collection instruments and procedure, and data processing and analysis. Under chapter four, data collected and the results obtained were tabulated to demonstrate the opinions of respondents on various questions. An in-depth discussion of results and findings from the data collected were also presented. The chapter five gives the overview of the whole study. It presents the summary, conclusions, and recommendations of the research.

Chapter Summary

This chapter concentrated on the introduction aspect of the study: the impact of physical work environment on performance among teachers in Efutu Circuit of Cape Coast Metropolis. The chapter specifically looked at areas like

background to the study, statement of the problem, purpose of the study, research objectives, research hypotheses, delimitations of the study, limitations of the study, definition of terms and organisation of the study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The purpose of this chapter is to undertake both theoretical and empirical review of literature that are relevant to the study. The scope of the review covers general information on assessing the effect of physical work environment and teachers' performance. The chapter begins with theories underpinning the study. The chapter also looks at thematic areas such as; concept of work environment, concept of physical work environment, factors affecting physical work environment, concept of teacher performance and the relationship between physical work environment and teachers' performance. Finally, the chapter provides a conceptual framework for the study.

Theoretical Framework

Several theories have been propounded to explain the relationship between workplace environment (both physical and behavioral) and employee performance. However, the theories underpinning this study are Herzberg's Two Factor Theory coined by Herzberg (1959) and The Affective Events Theory advanced by Weiss and Cropanzano (1996).

Herzberg's Two Factor Theory

The Herzberg Two Factor Theory is one of the content theories of motivation propounded by Frederick Herzberg in 1959. The theory articulates that there are two main factors: motivation factors and hygienic factors. Thus, Herzberg defined two sets of factors in deciding employees' working attitudes and levels of performance, named motivation and hygiene factors (Robbins & Judge, 2007). According to Herzberg (1959), the motivation factors are intrinsic in nature and include challenging work, recognition, responsibility, achievement, advancement, the work itself, and the possibility of personal growth which gives employee satisfaction. However, the hygiene is extrinsic in nature and includes status, technical supervision, interpersonal relations with supervisor, interpersonal relations with peers and subordinates job security, work conditions, company policy, salary and fringe benefits.

The motivation factors bring about satisfaction. Herzberg (as cited in Dartey-Baah & Amoako, 2011) postulated that the absence of motivation factors does not prove highly dissatisfying but when present, they build strong levels of motivation that result in satisfaction and good job performance. They are therefore called satisfiers or motivators. Contrary, the hygienic factors operate fundamentally to dissatisfy employees when they are absent but the

presence of such conditions does not necessarily build strong motivation. This was supported by the Gibson (2000) who averred that hygienic factors do not necessarily motivate employees. The hygienic factors are indirectly related to the job conditions that surround the doing of the job. Huling (2003) claims that the hygienic factors are necessary to maintain a realistic satisfaction level among employees and can also lead to dissatisfaction which may affect the performance levels of employees.

Environmental factors, such as poor lighting, poor ventilation, poor working conditions, low salaries, and poor supervisory relationships are primary causes for dissatisfaction in a job and a further decline in employees' performance. These for Herzberg are fundamental needs and for that matter, is the responsibility of society's businesses and industrial institutions to provide for its people in order to self-actualize. (Dartey-Baah & Amoako, 2011). The theory creates the chance for employees to take part in planning, performing and evaluating their work (Schultz et al., 2010). The theory points out that improving the environment in which the job is performed motivates employees to perform better.

Despite the importance of the theory in modern organizations, several schools of thoughts share contrary opinion from Herzberg's. Notable among them is King (2005) who attempted to stamp out and assess five different versions of the Two factor theory. King (2005) opined that the two versions are invalid as they are not supported by any empirical studies. However, despite the level of criticisms, the two-factor theory can be said to be a truly outstanding specimen for it to last a long period of time without disapproval. It has been a great influence on the body knowledge about workplaces'

motivation and performance. As such, this study is grounded on this theory to assess the effect of physical work environment and base on this theory, it can be inferred that when physical work environment is generally good, employees give off their best to meet their expectations thereby, enhancing their performance. This has been explored and validated by many scholars (Dartey-Baah & Amoako, 2011; Nanzushi, 2015) to examine the impact workplace environment on employees' performances.

Affective Events Theory

The theory was coined by Weiss and Cropanzano in 1996. Weiss and Cropanzano (as cited in Phua, 2012) indicated that the Affective Events Theory describes the relationship between employees' internal influences and their reactions to incidents that occur in their working environment which affect their performances. It suggests that positive-inducing and negative emotional incidents at work have significant psychological effect on employees' job satisfaction and performances. The impact results into long-lasting reactions displayed via organizational commitment, job satisfaction, and job performance.

This study adopted this theory because it sufficiently explains the relationship between employees' physical work environment and its influence on their level of performance. Thus, if teachers of schools in the Effutu Circuit in the Cape Coast Metropolis perceive their physical working environment (e.g. good lighting condition, adequate ventilation, less noise and good infrastructure conditions) to be good and satisfactory, their level of performance could be enhanced. This is a clear indication that, once teachers

experience a satisfactory physical work environment, their performance level increases.

The Affective Events Theory has been validated and widely used by several researchers to explain the link between work environment and employee performance. Ashton-James and Ashkanasy, (2005) claim that Affective Events Theory is both empirically and theoretically, restricted to events that are internal to the organization. The theory also considers how specific events at work other than job characteristics lead to specific emotional and behavioral responses (Briner, 2000). These events or things that actually happen at work affect the well-being of employees thus affecting their performances (Briner, 2000).

Overview of Working Environment

Undoubtedly, the working environment is considered as critical factor in ensuring that employees enjoy their respective jobs and give off superior performance. In tandem with this assertion, Dardeer, Tag-Eldeen and Salem (2017) aver that today's work environment constantly affect how employees perform their various tasks. Tetteh, Asiedu, Odei, Bright-Afful and Akwaboah (2012) further advance that the extent to which employees engage with the organization, especially with their immediate environment, influences their error rate, level of uniqueness and collaboration with other employees, absenteeism and ultimately how long they stay in a job.

There is no consensus regarding the definition of working environment. This means that several researchers have defined working environment in diverse ways. Working environment can simply be explained

as the professional setting where employees work. Parallel to this explanation, Tripathi (2014) defines working environment as the environment in which people work and comprises of physical setting, job profile, market condition and culture. Bushiri, (2014), also perceive working environment as the sum of the of the interrelationship that exists within the employees and the environment in which the employees work. Manu, (2016) says that working environment refers to working conditions and all existing circumstance affecting employees in the work place, including job hours, physical aspects, legal rights and responsibility, organisational climate and workload. However, the two are related in the sense that working environment is both an external and an internal condition that can influence working spirit and result in instantly finished jobs. This is because working environment can be anything that exist around the employee and can affect, he or she performs his or her duties.

Employees will always be happy and perform well when they realize that their immediate environmental conditions are in line with their obligations (Farh, Seo, & Tesluk). Chandrasekar (2011) also claims that the type of workplace environment in which employees operate determines whether or not organizations will prosper. A decent and conducive working environment is a condition where individuals can do their jobs in an ideal, secure, healthy, and comfort way (Sedarmayanti, 2003). The working environment can be categorized into two main components. Thus, the physical work environment and behavioral work environment (Dul & Ceylan, 2011; Oswald, 2012). However, the current study concentrates on the physical aspect of working environment.

Concept of Physical Work Environment

As aforementioned, the physical work environment is regarded as one of the key components of employees' work environment. The physical work environment can be described as the tangible aspect of work environment that affects an employee's work. Oswald (2012) describes the physical work environment as the type of working environment which is made up of elements that relates to the office occupiers' ability to physically connect with their office environment. Naharuddin and Sadeg (2013) defines physical work environment as the environment which allows employees or humans to become fit with their job.

Physical environment affects how employees in an organisation interact and perform tasks. Consistent with this assertion, Manu, (2016) postulates the physical work environment as a component of the work environment that directly affects the human sense and subtly alters interpersonal interactions, hence, productivity. However, a decent physical work environment increases employee's level of performance and plays an essential role in developing network and relationship at work (Nanzushi, 2015). Thus, physical work environment affects the employees' functions and it invariably determines how well an organisation performs (Ismail et al. 2010). Consequently, the onus lies on organizations to ensure a proper physical work environment so that the employees would not be stressed while getting their job done.

Extant literature like (Ajala, 2012; Veitch, Charles, Newsham, Marquardt & Geerts, 2004 has revealed that the physical work environment is

made up several factors or elements. Physical work environment can consist of different factors like heating, ventilation, lighting, noise, temperature and ergonomics of furniture (Vischer, 2007). Other physical work environment includes infrastructural facilities such as school building, staff offices, laboratories, libraries conveniences for staff and pupil's recreational facilities (Nakpodia, 2011; Dilani, 2004; Veitch & Newsham, 2000). These physical factors have a great role in the sustainability and overall working environment (Sohlman, 2016). This study limits the physical work environment to infrastructure, lightening conditions, ventilation and noise.

Nature of Physical Work Environment

McGuire and McLaren (2007) believes that an organization's physical environment particularly its layout and design can impact employee behaviour in the workplace. As indicated by Nitisemito (2001), some of the factors that influence the workplace include: cleanliness, water, lighting, colouring, security and music. A large number of work environments studies have shown that workers are satisfied with reference to specific work environment features (nature of physical work environment). These features preferred by users significantly contribute to their workspace performance. These features include infrastructure conditions, ventilation rates, lighting, access to natural light and acoustic environment (Humphries, 2005; Veitch, Charles, Newsham, Marquardt and Geerts, 2004). Thus, the dimensions of the nature of physical work environment include:

Infrastructure Conditions

Infrastructure is one of the key factors affecting physical work environment. Infrastructure looks at physical layout in both offices and arrangement of classroom furniture, availability of adequate buildings among others. Kuncoro and Dardiri, (2017) aver that factors such as availability of classrooms with adequate spacing and furniture for free and prompt movement of both teachers and pupils are considered as physical environmental factors that influences the teacher's job. This is a clear indication that the architecture of any educational facility needs to be properly evaluated before implementing.

A good physical environmental factor like proper infrastructure has both negative and positive consequences on an organisation as well as the tasks performed by employees. In tandem to this claim, Oswald (2012) asserts that physical work environment factors in the workplace like poor layout or overcrowding can cause common types of accidents such as tripping or striking against objects. Comfortable office design motivates and increases employees' level of performance to a greater extent. Tetteh et al. (2012) confirms this assertion by indicating that office furniture made of desks chairs, the filing system, shelves, drawers and all these components have a specific role to play in the proper functioning of any office so as to ensure productivity and the efficiency of the employees. Thus, office furniture helps the organisation tremendously in increasing its productivity, and at the same time taking care of the employees' health and performance.

The Caribbean Community Secretariat, (2011) revealed that the provision of adequate physical resources including facilities, equipment and maintenance can help in influencing attitudes and facilitating program success.

Thus, lack of physical facilities like infrastructure makes teaching ineffective for the teacher and this demoralizes the teacher no matter how determined he or she may be in achieving certain goals (Mogute, 2013). Maverutse (2015) also confirmed that physical factors like office building spaces have a strong impact on employee's performance. Inadequate office furniture and small classroom space also affect the duties and tasks performed by teachers. Salifu (2014) postulate that, in Ghana, teachers' physical working conditions such as appropriate classroom space, availability of sufficient furniture (both in the office and classroom) have positive influence on the level of performances of both teachers and students.

The physical condition of facilities in a learning environment determines teachers' and students' performances. This is because, if facilities are inadequate or dysfunctional, the learning process would be impaired and academic productivity will decrease (Issah, Abubakari & Wuptiga, 2016). This statement is confirmed by other researchers (Akinfolarin, 2008; Olatunji, 2013 Issah et. al 2016) who disclosed that there is ample evidence which suggests that inadequacy of infrastructural facilities, particularly buildings, have led to unproductive learning environment in the educational sector in developing countries.

Therefore, it can be concluded that if facilities are inadequate or dysfunctional in a particular work environment, it reduces the performance of the employees.

Lighting Conditions

Another important factor of the physical work environment of workers is lighting condition. Irrespective of the building type, lighting conditions (especially daylight) is regarded as the number of natural features that is needed in the physical work environment since it has a profound impact on workers physical, physiological and psychological health, and on their overall performance at the workplace (Dilani, 2004; Milton, Glencross & Walters, 2000; Veitch & Newsham, 2000). Parallel to this assertion, Lehto and Salo (2014) state that, as a physical work environment factor, lighting is perceived as a fundamental need to the overall comfort of employees in a work environment, making comfort as the basis for efficiency.

Lighting conditions can affect employees' performances. Al-Omari and Okasheh (2017) indicate that inconvenient lighting is a source of distress, hence leading to poor job performance. In tandem, Pulay (2010) alluded that lighting is very necessary to an employee's work environment because poorly designed and maintained lighting can lead to glare and flicker that may cause vision problems. It can therefore be inferred that, when employees are exposed to uncomfortable physical work environment in which there is a glare or dim, or lack of natural light or proper lighting, concentration, alertness and task performance is affected. It therefore behooves on organizations, including educational institutions, to modify the quality and nature of light so as to enhance the working environment of employees (Sehgal, 2012).

Ventilation

Ventilation (both in the office and classroom) is also another critical factor related to the physical work environment of teachers. In effect, Suleman

and Hussain (2014) alluded that ventilation as a physical environmental factor is a catalyst for achieving the predetermined objectives of an educational institutions. Ventilation can simply be described as the movement and provision of fresh air in a building or a room. Fahlström (2016) also explained ventilation as ensuring that there is ample, satisfactory and good air in an enclosed environment.

Good ventilation has several benefits for organizations. Classroom arrangement which improves ventilation tends to promote smooth teaching and learning process (Suleman & Hussain, 2014). Nanzushi (2015) asserted that ventilation as a physical work environment factor assists and improves workers' experiences, hence, increasing their level of performance. Niemela et al. (2002) further revealed that there is a fall in the performance levels of employees when the amount of air in their working environment is inadequate. On the contrary, the employees provide superior performance when they have adequate and satisfactory amount of air in their working environment.

There are several measures implemented in order to ensure sufficient ventilation in employees' work environments. Paramount among them is the provision of adequate windows in building (both offices and classrooms). Seppanen (as cited in Dardeer, Tag-Eldeen & Salem, 2017) disclosed that 35% of employees responded suddenly that the lack of windows was their biggest difficulty with their office space. The specific reasons given for the dislike of windowless offices were poor ventilation, inability to know about the weather, inability to see out and have a view, feelings of being cooped up, feelings of isolation and claustrophobia, and feelings of depression and tension (Dardeer, Tag-Eldeen & Salem, 2017). Parallel to this finding, it has been argued that

having pleasant scenery outside through the window can make people feel better in their working environment and can give positive impact on their well-being (Goel, Singh & Zhao, 2012).

Noise

Noise is one of the leading causes of employees' distraction, leading to reduce in performance, serious inaccuracies, and increased job-related stress. A

noise can be described as unwanted sound. Many researchers indicate that noisy places and exposing employees to such conditions can affect their job performance quality According to Bruce (2008), study showed that workplace distractions cut employee performance by as much as 40%, and increase errors by 27%. Tetteh et al. (2012) postulated that noise affects employees in more ways than they think because it affects both performance and health.

A working environment that is free from noise and disturbance is expected to give teachers a good spirit to do their work well (Kuncoro & Dardiri, 2017). There are circumstances where some schools are surrounded by houses, churches and other business activities like markets. The excessive noise generated from these markets and churches during their deliverance sessions and worship time drowns the lessons bringing lessons to a halt. Treve (2013) indicates that religious activities by churches found in the immediate environment of schools tend to affect teaching and learning. An observation by the researcher shows that the basic schools in the Efutu circuit are bombarded with noise from different agents such as churches, motorists and immediate houses who sometimes organize one event or the other.

The concept of Teacher Performance

Employers expect their employees to give off superior performance so as to ensure that organizations achieve their stated objectives. Thus, performance has become a key measure of how efficient and effective employees are on their respective jobs. Similar to this claim, Kuncoro, and Dardiri (2017) indicate that performance is one's work result or success rate as a whole over a certain period of time in performing tasks compared to various possibilities, such as work standards, targets or criteria which have been predetermined and agreed. Tetteh et al. (2012) further explained that the performance of an employee is measured actually by the output that the individual produces and it is related to productivity.

There is no universal definition with respect to the term 'performance'. Performance can be defined in several ways. Byars and Rue (2006) define performance as 'the extent to which an employee accomplishes the tasks that make up his or her job'. However, McNamara, (2005) also explains performance as any activities that ensure that organizational goals are constantly being met in an effective and efficient manner. However, the two are related in the sense that performance is a function of organizational performance. This is because performance influences the general organizational performance. In linking the explanation of performance to the teaching field, Obilade (as cited in Abwalla, 2014) comes with the definition that teachers' job performance as the duties performed by a teacher at a particular period in the school system in achieving organizational goals. Again, a teacher's job performance is explained as teacher's ability to combine

relevant and important inputs for the development of teaching and learning processes (Akinyemi 1993 as cited in Adeyemi, 2010)

Okoye and Ezejiofor (2013) stated that inefficient job performance will bring about a tragedy to the organisation as associated with lower productivity, profitability and impairment of overall organisation effectiveness. Employees would put in all efforts when they know and are aware of their environment and most importantly when their environment supports them to work effectively and efficiently (Akpan, 2017). A teacher's job performance is dependent on several factors. Supporting this assertion, Aunga and Masare (2017) indicate that the variables of teachers' job performance include, but is not only limited to effective teaching, the preparation of better lesson note, effective use of scheme of work, effective supervision, monitoring of students' work and disciplinary ability in the school system. Many other factors could influence the employee's job performance including equipment, physical work environment, meaningful work, standard operating procedures, reward for good or bad systems, performance expectancy, feedback on performance, in addition to knowledge, skills and attitudes (Stup, 2003; Al-Omari & Okasheh, 2017).

The educational successes and failure depend on the performance of teachers (Imaowaji, 2018). Therefore, the performance of teachers is emphatic for the improvement of education. Performance is the accomplishment of assigned task. Performance is the actual work done as against the expected of achievement. Performance is the result of the effort exerted and the resources utilized (Vipinosa & Acevedo 2015). Performance is measured in terms of both efficiency and effectiveness of the teachers (Garret & Poole in Ajayi &

Afolabi 2012). Awotua-Efebo in Andabai and Basuo (2013) has identified some performance criteria that teacher should be aware of and practice on entry into the teaching profession. These are: good classroom management, a caring personality, participation and involvement in school activities, attractive appearance, admission of one's own mistakes. Self-control punctuality to work, co-operation with constituted authority and fellow staff and commitment to duty. Peretemode in Amin et al. (2013) stated that job performance is determined by the workers level of participation in the day to day running of the school system.

Empirical Review

Dardeer, Tag-Eldeen and Salem (2017) conducted a study to examine the influence of physical work environment on hotel back-of-the-house employees' satisfaction and productivity: a case study on Hilton hotels. The case study research design was employed. The target respondents of this study included back-of-the-house departments in Hilton hotels in Egypt. Structured questionnaire was used for the study. According to Dardeer, Tag-Eldeen and Salem (2017), performance was measured by employees' satisfaction and productivity. The findings of the study provided important evidence of the impact of the physical work environment on employees' performance. The findings of the study revealed that that there is a relationship between physical work environment (sound, lighting, colour, temperature, workspace, design, layout of equipment and tools) and employees' performances (productivity) and satisfaction. The findings also revealed that the most satisfied and most productive employees at Hilton Hotels in Egypt are those who have the highest level of convenient physical work environment.

Kuncoro and Dardiri (2017) explained that the work environment (conditions of the physical work, environment, psychological work environment and non-physical work environment) does not positively support the pedagogical and professional performance of teachers. Thus, a workplace that is good and clean, free from noise and disturbance and has enough light is expected to give teachers a good spirit to do their work well. On the contrary, a poor, dark and humid work environment will lead to fatigue and lower the spirit and performance. Kuncoro and Dardiri (2017) alluded that a good physical environment provides workers, including teachers with the security that they need in order to carry out their work easily. When teachers or any worker is content with his or her work, high performance is obtained which is transferred to the children they are impacting the knowledge into.

Bushiri (2014) undertook a study on the effect to assess the impact of working environment on employees' performances at Institute of Finance Management in Dar es Salaam Region. Descriptive research design was used for the study. Simple random sampling technique was respectively used to select fifty (50) respondents for the study. Structured questionnaires were used for data collection. The study findings showed that organization's working environment had an impact on the performance levels of employees. The study also revealed that employees' will improve their performance if the problems (work noise distraction, supervisor's interpersonal relationship with subordinates, presence of job aid, the use of performance feedback) identified in the study are tackled by the management.

In a related study in the Mobile Telecommunication firms in Nairobi, Nanzushi (2015) investigated the effect of workplace environment on

employee's performance. The target population was all the employees at Airtel Networks Kenya Limited, Safaricom Limited and Telkom Kenya Limited based at the headquarters. Descriptive research design was adopted for the study. Stratified random sampling technique was used in selecting 1626 employees (250 from Airtel, 976 from Safaricom and 400) for the study. The findings of the study concluded that work environmental factors that influenced employee performance were physical environment factors, reward, management / leadership style, training and development and work-life balance.

Elsewhere in Malasia, Naharuddin and Sadegi (2013) conducted a study on factors of workplace environment that affect employees' performances. The principal aim of the study was to investigate the effect of workplace environment's factors towards employees' performance. Descriptive research design was employed for the study. The study resorted to the stratified random sampling technique to collect the data from 139 respondents. Questionnaires were the main data collection instrument for the study. The findings of the study revealed that only supervisor support is not significant towards the employees' performance. It was further found that, job aid and physical workplace environment have a significant relationship towards employees' performances.

Oswald (2012) conducted a study to determine the effect of working environment on worker's performance: the case of reproductive and child health care providers in Tarime district. The study employed cross sectional exploratory design. Data was collected using closed and open-ended questionnaires. The stratified sampling technique was employed for the study.

The findings disclosed that the working environment elements (office building, availability of drugs, and availability of equipment) have a significant effect on the performance of health providers in the Reproductive and Child Health unit.

Nakpodia, (2011) indicated that physical work environment such as overcrowded furniture in classrooms have a direct link with performance of teachers as well as students. Thus, it can be generally inferred that job environment has a direct reflection on performance. Rantamen (2013) also disclosed that the absence of a good physical environment can cause disaffection, different health problems and a decrease in productivity. Strong (as cited in Srivastava, 2008) in a study observed that social, organizational and physical context serve as the impetus for tasks and activities, and considerably influence workers' performances. Workplace environmental elements such as sufficient light, absence of noise, proper ventilation and layout arrangement substantially increases employees' performances (Ajala, 2012).

Effects of Poor Physical Work Environment

Teachers are fraught with several challenges as a result of working in a poor physical work environment. Akpan (2017) indicate that in a situation where employees work in a conducive physical environment, their mindset and relationship with other colleagues get affected. Kuncoro and Dardiri (2017) claim that excessive noise generated all the time from markets and churches during their deliverance sessions and worship time drowns the lessons bringing lessons to a halt. Thus, in such environments, fatigue would surely set in and performance would be nothing to write home about it. This

therefore implies that working in poor physical environment characterized by excessive noise can affect learners' attention, thereby causing a decline in both teachers and learners' performances.

How well employees engage with the organization, especially with their immediate environment, influences to a great extent their error rate, their health, level of uniqueness and collaboration with other employees, absenteeism and ultimately how long they stay in a job (Tetteh et al. 2012). Nakpodia (2011) also commented that overcrowded building with less ventilation and lighting is not only repulsive but energy-sapping as students struggle and wrestle over sitting positions. In some cases, the students lean on the walls and hang near windows to listen to the teacher.

The importance of comfortable sitting in effective classroom control cannot be over-emphasized. Akpan, (2017) p.34 concluded that "when students sat in a semi-cycle style, those directly facing the teacher participated more than those on the sides; when students sat in rows lecture style those in front participated more than those at the back, and those in the middle participated more than those at the sides." Corroborating this finding, Tawari, (1993), p.19 observed that "students in the periphery of the classroom are spectators rather than actors in the classroom drama."

Deducing from the extant literature above, it can be concluded that these are the effects of poor physical environment include:

Teaching becomes difficult and encourages teacher absenteeism and truancy.

Noise which affects teacher and student attention thereby causing a decline in performance

Fear of ghost which makes the educational environment uncomfortable to stay especially with schools closer to cemeteries

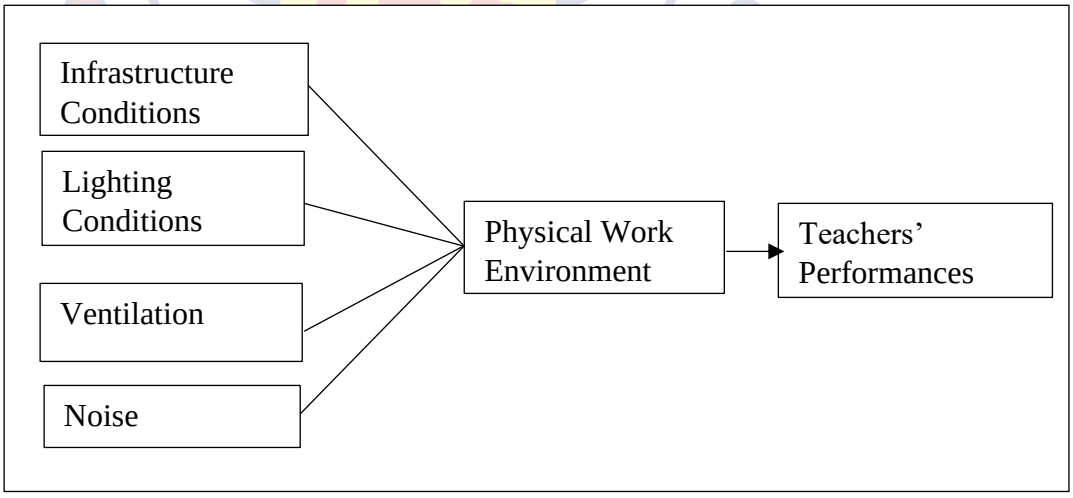
Poor lighting which intensifies the committing of errors.

Poor ventilation which affect employee's health.

Conceptual Framework

A conceptual framework, according to Mugenda and Mgenda (2003) provides an explanation of the researcher's perception on the relationship between variables that are deemed to be vital in a study. As such, the present study is based on the premise that, physical work environment has an impact on teachers' performances. The conceptual framework developed to guide the study is shown in Figure 1.

Figure 1: Conceptual Framework: Physical Work Environment and Teacher's performance



Source: Author's Own Construct, Ziadzor (2018)

The conceptual framework shown in Figure 1 illustrates how physical work environment influences teachers' performances. From the conceptual framework, physical work environment (infrastructure conditions, lighting conditions, ventilation, and noise) is the independent variable while teachers'

performance is the dependent variable. The goal of every organization, is to ensure that they achieve their stated objectives, and educational institutions like basic schools are no exception. Teachers' performances are key if educational institutions are to achieve their stated objectives. However, the performance of teachers is highly influenced by the conditions of their working environment, especially the physical work environment (infrastructure conditions, lighting conditions, ventilation, and noise).

Chapter Summary

This chapter was devoted to reviewing relevant and related literature regarding this study. The chapter covered thematic areas such the concept of work environment, concept of physical work environment, factors affecting physical work environment, overview of teacher performance and the relationship between physical work environment and teachers' performance. In this chapter, the researcher made constructive criticisms regarding the extant literature that were reviewed. Finally, the chapter provides a conceptual framework for the study.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter dealt with the research methods employed for the study. The chapter specifically covers the research design, study area, population, sampling and sampling procedure, research instrument, data collection procedure, pre-testing, validity and reliability, data analysis and ethical consideration.

Research Design

Research design is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems (Kumar, 2012). In this study, the descriptive research design with quantitative approach was used. This is in line with Kotler and Keller (2013) who averred that, descriptive research design is suitable to assess people's knowledge, perception, beliefs, preferences and satisfaction, in an attempt to measuring these magnitudes in the general population. The study employed descriptive research because is directed at making careful observations and detailed documentation of a phenomenon of interest and provides a concrete description of the state of affairs as it exists (Bhattacherjee, 2012).

Also, it allows the collection of a large amount of data from a sizeable population in a highly economical way (Saunders, Lewis & Thornhill, 2012). Again, the descriptive research design helped to describe, explain and validate findings of the study (Creswell, 2003). However, Ary et al. (2006) assert that descriptive survey is a relatively laborious and time-consuming method and is sometimes susceptible or easily influenced through the introduction of biases in measuring of instruments and so on. Also informing the decision to approach the study quantitatively is the assertion that the data

are quantitative and almost always require the use of a statistical test to establish the validity of the relationships.

Research Approach

The study employed the quantitative research approach based on the nature of the study purpose under consideration, specific objectives/hypotheses and the nature of the primary data to be collected and analyzed. The constructs were by nature measurable and subjectable to statistical manipulation. According to Creswell (2014) quantitative approach deals with explaining phenomena by collecting numerical data that are analyzed using mathematically based methods, in particular, statistics. Quantitative methods, normally using deductive logic, seek regularities in human lives, by separating the social world into empirical components called variables which can be represented numerically as frequencies or rate, whose associations with each other can be explored by statistical techniques, and accessed through researcher-introduced stimuli and systematic measurement (Ben-Shlomo, Brookes & Hickman, 2013; Rahman, 2017).

This approach typically begins with data collection based on a hypothesis or theory and it is followed with application of descriptive or inferential statistics (Tashakkori & Teddlie, 2003). Quantitative methods are frequently described as deductive in nature, in the sense that inferences from tests of statistical hypotheses lead to general inferences about characteristics of a population. Quantitative methods are also frequently characterized as assuming that there is a single "truth" that exists, independent of human perception (Lincoln & Guba, 1985). The quantitative findings are likely to be

generalised to a whole population or a sub-population because it involves the larger sample which is randomly selected (Carr, 1994). Some limitations relating to quantitative research approach are that quantitative research approaches take snapshots of a phenomenon: not in-depth, and overlook test-takers' and testers' experiences as well as what they mean by something (Rahman, 2017).

Study Area

Efutu municipality is one of the 20 administrative districts in the Cape Coast Metropolis, Central region of Ghana. The population of Efutu, according to the 2010 Population and Housing Census of Ghana, is 68,592 representing 3.1% of the region's total population. The majority of the population in the Metropolis lives in urban areas. The municipality has a youthful population with one third of the population below 15 years. The total age dependency ratio is 61. More than three quarters (80.7%) of the population aged 11 years and older in the Metropolis are literate. Of the literate population, 63.6% are literate in English and Ghanaian language. Close to 30% of the literate population are literate in English language only (2010 Population and Housing Census of Ghana).

About a third (33.8%) of the population currently in school are in primary school with 13.3% at Junior High school while 6.9% of the population are currently in Senior High school. 27.8% are at the tertiary level. The high proportion recorded for tertiary level could be due to the location of the University of Education in the Metropolis (District Analytical Report, 2010). Apart from the tertiary level where the proportion of males is higher than that

of females, at each of the subsequent levels, the proportions of females are higher than that of males. A higher proportion of females (36.3%) than males (31.6%) are enrolled at the primary level. Similar patterns are observed for females who constitute 13 percent and males 12.9 percent at the Junior High and Senior High School (SHS) levels (District Analytical Report, 2010).

Population

The population of a research is generally a large collection of individuals or objects that represents the main focus of a scientific research (Taylor, Sinha & Ghoshal, 2011). Puwanenthiren (2011), also disclosed that population refers to all the cases being under. It includes all the items in the field of inquiry (Kombo & Tromp, 2006). For the purpose of this study, the target population consist of all basic school teachers in the Efutu circuit. Regarding the breakdown of the population, the females were (139) and the males were (54). In all a total population of 193 basic school teachers were used.

Sample and Sampling Procedure

A sample size is sub set of the population drawn to represent the entire population or any combination of sampling units that does not include the entire set of sampling units that has been defined as the population (Garson, 2012). A sample size of 130 was selected and surveyed accordingly. The selection of the sample size was based on the population-sample formula

designed by Slovin (1973). This formula is a guide to selecting suitable sample size to a given population size.

Simple random sampling technique was used in selecting the respondents for the study. Simple random sampling technique was used to select respondents from the sampling frame to participate in the study. Random numbers were generated for all elements in the population and a computer programme was used to randomly select the participants. Simple random sampling technique gives all the element in the sampling frame equal chance of being selected (Zikmund, Babin, Carr & Griffin, 2009; Ben-Shlomo, Brookes & Hickman, 2013). This is also a pre-requisite for predictive studies (Creswell & Clark, 2017; Zikmund, Carr Babin, & Griffin, 2013; Creswell, 2014).

Saunders, Lewis, and Thornhill (2009) also argue that the simple random sampling technique is appropriate when the sampling frame is accurate and easily accessible. Again, Perez (2009) highlights that one of the major advantages of the simple random sampling is its ease of use and accurate representation of a larger population. The calculation of the sample is shown below.

The formula for the calculation of the sample size based on the Slovin's formula is given as follows (Slovin, 1973):

$n = N / (1 + Ne^2)$

Where:

n is the sample size

N is the size of the target population=193

e is the error tolerance =0.05

sample size (s) $n=193\div [1+193(0.05)^2]$

$n=500\div [1+0.4825]$

$n=193\div 1.4825$

$n=130$

Therefore, in substituting the target population into the formula, the sample size 130 was obtained.

Data Collection Instrument

Questionnaire was the main data collection instrument used for the study. Questionnaire is a formalized set of questions for obtaining information from respondents. Both open-ended and close ended questions were included in the questionnaires. The open-ended questions were relatively few but allowed the respondents to answer the questions using their words as well as allowing the researcher to explore ideas that would not otherwise be heard. Open-ended questions are also useful where additional insights are sought and the researcher is less familiar with the subject area and cannot offer specific response options (Salant, Dillman, & Don, 1994). On the contrary, the close-ended questions allowed the researcher to obtain clear and concise responses from the respondents. The close-ended items employed checklist – a list of behavior, characteristics or other entities that the researcher is investigating – and Likert scale – which is more useful when behaviour, attitude or other phenomenon of interest needs to be evaluated in a continuum (Leedy & Ormrod, 2010).

The researcher's decision to use questionnaire stemmed from the fact that it is the best method by which reliable information can be obtained from a large population. This is supported by Taylor, Sinha and Ghoshal (2011) who asserted that the use of questionnaire is a sensible way for data collection if factual information is needed from substantial number of people. The questionnaire was designed in line with the research objectives and hypotheses. Teachers' performance was measured using a scale developed by Aacha (2010). The scale had ten (10) items. The response option of the scale ranged from (Strongly agree to strongly disagree). Physical work environment was also measured using a scale developed by Moos (1994). The scale had twelve (12) items and had response options ranging from strongly agree to strongly disagree). The scales were adapted to suit the study.

The questionnaire was subdivided into four (4) main sections. Section "A" covered the demographic characteristics of the respondents. Section "B" dealt with constructs on the nature of physical work environment of teachers in schools in the Efutu Circuit of Cape Coast Metropolis. Section "C" measured the constructs on teachers' performances. Section "D" focused on constructs on the challenges of working in a poor physical environment.

Data Collection Procedure

Prior to the collection of data, permission was obtained from the head teachers of various basic schools in the Efutu circuit via the presentation of letter of introduction, that was collected from School of Business, specifically, the Department of Management. The instrument was personally administered. In all, respondents were given a maximum of thirty-five (35) minutes to

complete the questionnaire. Respondents who were unable to complete the filling of the questionnaire within the stipulated time were given extra five minutes to complete. During the data collection, the respondents had the opportunity to seek clarifications on issues that were not clear to them. In all, a response rate of 100% was recorded.

Validity and Reliability

Reliability and validity are two key components to be considered when evaluating a particular instrument. Reliability, according to Bless and Higson-Smith, (2000), is concerned with consistency of the instrument, and an instrument is said to have high reliability if it can be trusted to give an accurate and consistent measurement of an unchanging value. A Cronbach's Alpha of 0.8 was recorded for the internal consistency and since it is above the standard 0.7, the scale can be considered as being reliable with the sample size (Pallant, 2010).

Table 1 summaries the reliability score for the individual constructs of the study. The results of the reliability test for the variables as presented in Table 1 shows that all the constructs are reliable in that the results are all greater than the minimum criteria suggested by Pallant, 2005. The validity of an instrument refers to how well and instrument measures the particular concept it supposed to measure (Saunders et al., 2009). They further argue that an instrument must be reliable before it can be valid, implying that an instrument must be consistently reproducible; and that once this has been achieved, the instrument can then be scrutinized to assess whether it is what it purports to be.

Table 1: Reliability Results

Construct	Cronbach' Alpha	Items
Physical work environment	0.725	13
Teacher's performance	0.701	10
Challenges of poor physical work environment	0.831	7
Overall scale	0.800	37

Source: Field survey, Ziadzor (2018)

To ensure validity of questionnaires, the researcher reviewed other relevant literature and those literatures supported the construct of the instrument. Some of the items in the scales were scientifically validated items. Further, the designed questionnaire was submitted to the project supervisor for vetting, correction and approval before distributing it to the respondents.

Pre-testing

Pre-testing is very important in every research, specifically the collection instrument. Irrespective of how the researcher is pressed for time, it is important that the questionnaire is given a trial run, to know if it would succeed. According to Sweeney (2009), data collection instruments do not emerge fully-fledged; they have to be created or modified, shaped and developed to maturity after several test flights. Thus, every aspect of this survey had been tried out beforehand to make sure that it works as intended.

The trial testing of the questionnaire helped bring to bear how long respondents took to complete the questionnaire, the clarity of the structure, which questions were unclear or ambiguous, which questions the respondent

felt uneasy about answering; whether certain major topics were omitted, and whether the layout was clear and attractive (Jenn,2006). This information, resulted in important improvements made to the questionnaire which enhanced the actual data collection exercise. Questions that seemed unclear were restructured before the actual data collection exercise was carried out.

Data Analysis

Analysis of data is a process of editing, cleaning, transforming, and modelling data with the goal of highlighting useful information, suggestion, conclusions, and supporting decision making (Adèr, 2008). The use of analytics requires reducing complex data into meaningful and actionable information (Johnson, Levine, Smith & Stone, 2010). The responses from the questionnaires were edited, coded and entered into Statistical Package for Social Science (SPSS version 22.0) for the analysis. This statistical software is recommended for us in studies in social sciences (Zikmund, 2000). SPSS application was configured with the SPSS process macro package. This aided the mediation analysis.

Composite variables were formed for each of the constructs and this enhanced holistic approach to data analysis. The data were analyzed and interpreted with descriptive statistical techniques such as mean, standard deviation, frequency count and percentage. These were mostly done for the demographic characteristics of the respondents. The use of any of these descriptive statistics was influenced by the nature of findings at hand (Leedy & Ormrod, 2010). Inferential statistical technique such as standard multiple regression was conducted to find out how much variance in the dependent

variable (teachers' performance) is explained by the independent variables (physical work environment). Linear regression allows us to predict an outcome based on one or several predictors (Kellar & Kelvin, 2013; Polit, 2010). The findings were chronologically presented on Tables and Figures, which made the interpretation and discussion of the findings easier and straight forward.

Ethical Considerations

According to Cooper and Schindler (2008), ethics are the norms or standards of behaviour that guide moral choices about our behaviour and our relationships with others. Research ethics therefore relates to the way in which we carry out our research activities, from formulating the research topic to the analysis of data in a moral and responsible way. Researchers may encounter moral dilemmas due to using methods that are seen to have violation against human rights or possibly causing harm (Gill & Johnson, 2010). Malhotra (2007) pointed that when conducting research, especially, ethical issues related to the respondents and the general public are of primary concern.

To avoid unethical dilemma, the research and ethics rules were meticulously followed by the researcher. An introductory letter was received from the Department of Management, University of Cape Coast. The letter introduced the researcher as a student of University of Cape Coast who was on academic assignment. Permission was sought from the respondents all heads of the various schools as well as the teachers in the respective circuit. The respondents where then made aware that responses to the questions are not compulsory and that they may withdraw from the study at any time. However,

they were encouraged to fully participate in the survey. Their confidentiality and subject anonymity were strictly preserved at every level of the study.

Chapter Summary

The study was conducted to find the impact of physical work environment on teachers' performance. The respondents were surveyed through descriptive survey design and respondents were randomly selected. Questionnaire was the main data collection instrument for the study. Primary data analysis was conducted through the use of SPSS (Version 22.0). Finally, the researcher adhered strictly to the ethical conducts of a research.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The purpose of this study is to determine the impact of physical work environment on performance among teachers of schools in Efutu Circuit of Cape Coast Metropolis. The preceding chapter looked at the research methods employed for the study: research design, population, sample and sampling technique, data collection instrument. However, the focus of this present chapter is to provide the results of the analyses from field data and assess its related findings taking into consideration the objectives. The chapter is organised into two main parts. The first part deals with the demographic information of respondents while the second part covers analysis related to the objectives of the study.

Demographic Information of Respondents

The findings on the demographic information of the respondents surveyed for the collection of primary data are presented with frequencies and respective percentage in Table 2.

Table 2: Demographic Information of Respondents

Demographic Variables	Frequency	Percentage
Age range		
Below 25 years	22	16.9
25-30 years	43	33.1
31-35 years	24	18.5
36-40 years	24	18.5
41-45 years	9	6.9
Over 45 years	8	6.2
Gender		
Male	41	31.5
Female	89	68.5
Education level		
Diploma/HND	70	53.8
First Degree	51	39.2
Masters	9	6.9
Marital Status		
Married	66	50.8
Single	62	47.7
Widowed	2	1.5
Rank		
Principal Superintendent	95	73.1
Senior Superintendent	24	19.6

Junior Superintendent	11	10.3
Tenure of Service		
1 – 5 years	60	46.2
6 – 10 years	35	26.9
11 – 15 years	22	16.9
16 – 20 years	10	7.7
21 years and above	3	2.3
Total	**130**	

Source: Field survey, Ziadzor (2018)

The demographic information of the respondents is presented in Table 2. A good look at Table 2 shows the findings on the gender of respondents. Regarding the age of respondents, it was found that majority (33.1%) of the respondents were between 25-30 years. This was followed by 18.5 % of the respondents who were between 31-35 years and 36-40 years respectively. Respondents who fell below 25 years were 16.9%. 6.9% of the respondents were between 41-45 years while only 6.2% of the respondents were over 45 years.

Concerning the gender of respondents, it was found that majority (68.5%) of the respondents were females while the remaining 31.5% of the respondents were males. The implications are that the teaching staffing structure in Efutu Circuit of the Cape Coast Metropolis is dominated by female teachers although there are some male teachers as well. How could this be possible? Is the teaching profession a female-dominated in Efutu Circuit of the Cape Coast Metropolis? It could therefore be inferred that most of the teachers in Efutu Circuit of the Cape Coast Metropolis are females.

On the educational level of the respondents, it was found that majority of the respondents, representing 53.8% had Diploma/HND, followed by 39.2% of the respondents who have first degree. Only 2.1% of the respondents

have Master's degree. This signifies that teachers in Efutu Circuit of the Cape Coast Metropolis schools are adequately educated and have the pre-requisite qualifications to work as such. This is a good finding as it proves only the educated and a learned can equally teach to ensure the total development of the human capital of the nation-Ghana.

Regarding the marital status of respondents, it was found that majority 50.8% of the respondents were married. This was followed by 47.7% of the respondents who single. Only 1.5% of the respondents were widowed. This has implications for the HR policies and practices that needs to be implemented in schools in Efutu Circuit of the Cape Coast Metropolis must considered marital status so as to help the Ghana Education Service get more committed employees to promote the achievement of the objectives of government of Ghana, thereby, enhancing their job performance.

With regards to the rank of respondents, it was found that, majority 73.1% of the respondents were Principal Superintendent. This was followed by 19.6% of the respondents who were Senior Superintendent. Only 10.3% of the respondents were Junior Superintendent.

Finally, concerning the tenure of service of respondents, it was found that majority 46.2% of the respondents have worked between 1 – 5 years. This was followed by 26.9% of the respondents who have worked between 6 – 10 years. 16.9% of the respondents have worked between 11 – 15 years while 7.7% of the respondents have worked between 16 – 20 years. Only 2.3% of the respondents have worked for 21 years and above. It can therefore be inferred that, most the respondents have worked for quite a longer period,

hence information gathered from them can be relied upon to make informed decision with respect to the study.

Nature of Physical Work Environment of Schools in the Efutu Circuit of Cape Coast Metropolis

The study sought to determine the nature of physical work environment of schools in Efutu Circuit of Cape Coast Metropolis. The physical work environment variables that were measured include Infrastructure Conditions, Lighting Conditions, Ventilation and Noise. A 5-point Likert scale was used to measure the attitude of the respondents, rated as follows: 1= Strongly Disagree; 2= Disagree; 3= Uncertain, 4= Agree and 5= Strongly Agree. The findings are descriptively summarised with mean scores as well as the respective standard deviation scores for all the individual indicators of the physical work environment. The findings are presented on Table 3, Table 4, Table 5, Table 6 and Table 7.

Table 3: Infrastructure Conditions

	Mean	**Std. Deviation**
Teachers have adequate furniture (chairs and tables) to work with	3.6923	1.05100
Teachers' furniture is in good condition	3.5769	1.24056
Our offices and workspaces are well designed	3.6231	1.34231
The layout of the offices and workspaces here are good	3.6231	1.20216
Weighted Mean	**3.6289**	

Source: Field survey, Ziadzor (2018)

Table 3 shows the findings regarding infrastructure conditions as a physical work environment variable. The findings show that the respondents agreed that teachers have adequate furniture (chairs and tables) to work with (M=3.6923, SD=1.05100). It was also found that the respondents agreed that Teachers' furniture are in good condition (M=3.5769, SD=1.24056). Again, it was found that the respondents agreed that their offices and workspaces are well designed (M=3.6231, SD=1.34231). Finally, it was found that the respondents agreed that layout of the offices and workspaces here are good (M=3.6231, SD=1.20216). In all the cases it should be noted that the physical work environment can spur employees, performance. This reflected in the weighted mean of 3.6289.

Findings from the study shows that elements of the physical workplace environment play an important role in positively influencing the employee's performance. The finding showed that adequate furniture to work with, furniture comfortability, well designed offices and workspace and a good layout and spacious office would boost the employee's performance. These results were consistent with McCoy and Evans (2005) who found out that elements of physical work environment need to be proper so that the employees would not be stressed while doing their work. Stress affects the performance of employees in that they are not able to perform to the expected standards. Similarly, the finding is consistent with that of Salifu (2014) who revealed that, in Ghana, teachers' physical working conditions such as appropriate classroom space, availability of sufficient furniture (both in the office and classroom) have positive influence on the level of performances of both teachers and students.

Table 4: Lighting Conditions

	Mean	Std. Deviation
There is ample amount of natural light comes into the classroom and offices	3.7846	1.19420
There are enough electric bulbs in the offices and classrooms	2.7615	1.43491
Weighted Mean	**3.2731**	

Source: Field survey, Ziadzor (2018)

Table 4 shows the findings regarding lighting conditions as a physical work environment variable. The findings show that the respondents agreed that there is ample amount of natural light comes into the classroom and offices (M=3.7846, SD= 1.19420). The respondents generally agreed that ample amount of natural light comes into the classroom and offices. Thus, they see clearly which enhance or increase their job performance. The findings corroborate with the assertion of Lehto and Salo (2014) who highlighted that, as a physical work environment factor, lighting is perceived as a vital need to the overall comfort of employees in a work environment, making comfort as the basis for efficiency.

However, it was found that the respondents disagreed that there are enough electric bulbs in the offices and classrooms (M=2.7615, SD=1.43491). This means that the schools in Efutu Circuit of Cape Coast Metropolis lacks electric bulbs in the offices and classrooms. It implies that school teachers in Efutu Circuit of Cape Coast Metropolis cannot see clearly to carry out their duties during night when they want to learn or study and on days when the weather is severally cloudy. This does not support teaching and learning, which does not help them in performing their duties. This result is in line with

the finding of Hameed & Amjeed (2009) whom they asserted that accomplishing daily task with dim light by employees causes eyestrain, headaches and irritability. Due to these discomforts employees performance are greatly reduced.

Table 5: Ventilation

	Mean	Std. Deviation
There are enough windows in the offices and classrooms	3.8538	1.18852
Teachers have access to natural or artificial air in offices and classrooms	3.5769	1.21913
Our offices and classrooms are free from odour, stuffy air and dust	2.9077	1.26059
There is overcrowding at my workplace	3.6615	1.26094
Weighted Mean	**3.4999**	

Source: Field survey, Ziadzor (2018)

Table 5 shows the findings regarding ventilation as a physical work environment variable. The findings show that most the respondents agreed that there are enough windows in the offices and classrooms (M=3.8538, SD= 1.18852). It was also found that the respondents agreed that teachers have access to natural or artificial air in offices and classrooms (M=3.5769, SD=1.21913). Likewise, it was found that the respondents agreed that there is overcrowding at their workplace (M=3.6615, SD=1.26094). However, it was found that the respondents disagreed that their offices and classrooms are free from odour, stuffy air and dust (M=2.9077, SD=1.26059). Overall, it can be concluded that ventilation as a physical work environment in the schools are good. This reflected in the weighted mean of 3.4999.

It implies that good ventilation increased preformance and reduces stress in workers. The finding is consistent with the findings of Suleman & Hussain (2014) that disclosed ventilation as a physical environmental variable which considered as a catalyst for achieving the predetermined objectives of educational institutions. Also, Fahlström (2016) concurs with this finding by indicating that the ventilation ensures ample, satisfactory and good air in an enclosed environment. The finding further concurs with that of Goel, Singh & Zhao, (2012) whom they argued that having pleasant scenery outside the window can make people feel better in their working environment and can give positive impact on their well-being and enhance their performance. It can therefore be inferred that the provision of adequate windows, access to natural air and a physical work environment that is not overcrowded is very necessary to ensure good ventilation.

Table 6: Noise

	Mean	**Std. Deviation**
The school is situated in a quiet environment	3.5923	1.27891
The school has many noise distractions (moving vehicles, market women, church or households)	2.6231	1.38242
Lessons in other classrooms distracts my lessons	2.3462	1.12554
Weighted Mean	**2.8539**	

Source: Field survey, Ziadzor (2018)

Table 6 shows the findings regarding noise as a physical work environment variable. The findings show that the respondents agreed that the

school is situated in a quiet environment (M=3.5923, SD= 1.27891). Again, it was found that most of the respondents disagreed that the school has many noise distractions like moving vehicles, market women, church or households (M=2.6231, SD=1.38242). Finally, it was found that the respondents disagreed that lessons in other classrooms distracts my lessons (M=2.3462, SD=1.12554). Overall, it can be inferred that, the respondents disagreed that they were affected by noise in their physical work environment. This reflected in the weighted mean of 2.8539. This implies that the basic schools in the Efutu circuit are not bombarded with noise from different agents such as churches, motorists and immediate houses who sometimes organize one event or the other. Thus, the teachers are able to carry out their various duties due to the absence of noise which brings about less distractions and reduction in job-related stress in their environment. The result is in line with Ajala, 2012 who asserted that workplace environment element such as absence of niose substantially increases employee performance. The finding of the study is also in line with the assertion of Kuncoro and Dardiri, (2017) which elaborated that a working environment that is free from noise and disturbance give teachers a good spirit to do their work well hence, increasing their performance.

Table 7: Overall Description of Nature of Teachers' Physical Work Environment

		Frequency	Percent
Valid	Bad	10	7.7
	Moderate	42	32.3
	Good	57	43.8
	Very good	21	16.1
	Total	**130**	**100.0**

Source: Field survey, Ziadzor (2018)

Table 7 shows the overall description of the nature of teachers' physical work environment. The findings show that majority 43.8% constituting 57 of the respondents indicated that their physical work environment is good. This was followed by 32.3% of the respondents who indicated that their physical work environment is moderate. 16.1% of the respondents indicated that their physical work environment is very good while only 7.7% of the respondents indicated that their physical work environment is bad. In all, it can be inferred from the findings that, the physical work environment of teachers in schools in the Efutu Circuit of the Cape Coast Metropolis is quite good and satisfactory which aids them in increasing their performance.

The result in in line with Nanzushi, (2015) who says that a good physical work environment increases employee's level of performance and plays an essential role in developing network and relationship at work. Kuncoro and Dardiri (2017) further supports the finding by highlighting that a good physical environment provides workers, including teachers with the security that they need in order to carry out their work easily hence enhancing their job performance. Moreover, Akpan et al. (2017) found that in a situation

where employees work in a conducive physical environment, their mindset and relationship with other colleagues get affected.

Examine the Effect of Physical Work Environment on Teacher's Performance

The study again sought to examine the effect of physical work environment on teacher's performance. In order to ascertain the effect of physical work environment on teacher's performance, standard multiple regression was computed. Composite of physical work environment variables was the independent variable (predictor) and composite of the individual constructs of the dependent variable (teacher's performance). The findings are presented on the subsequent paragraph.

Table 8: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.244[a]	.159	.152	3.76770

a. Predictor: (Constant) Physical Work Environment

b. Dependent Variable: Teacher Performance

Source: Field survey, Ziadzor (2018)

A joint correlation between the predictors (physical work environment) and the teachers' performance (dependent variable) was computed. The interpretation of the correlation results is based on the following cut-off points proposed by Cohen (1988) in that respect: r = 0.10 to 0.29 or r = -0.10 to -0.29 (Very weak); r = 0.30 to 0.49 or r = -0.30 to -0.49 (Weak); r = 0.50 to 0.69 or r = -0.50 to -0.69 (Moderate); r = 0.70 to 0.99 or r = -0.70 to -0.99 (Large). It was discovered that there was a statistically significant positive but weak

correlation between physical work environment and teachers' performance (R=.244[a]). It thus shows that the more the predictors increase, the more teachers' performance also increase in schools in Efutu Circuit of the Cape Coast Metropolis. Conversely, it can be adduced that lower levels of the predictors (physical work environment variables) is associated with lower levels of teachers' performance. It must be remembered that this does not suggest causality in the relationship between physical work environment and teachers' performance at Efutu Circuit of the Cape Coast Metropolis. The positive relationship between physical work environment and teachers' performance supports some empirical studies (Naharuddin & Sadegi, 2013; Oswald, 2012).

With respect to the predictive capacity of the model, it was discovered that physical work environment accounted for 15.9% positive variance in teachers' performance in schools at Efutu Circuit of the Cape Coast Metropolis. (R^2=0.159). On the other hand, it can be inferred from the model that 84.1% variance in performance is accounted for by factors not captured in the model. The R-square has been recognized as the most common effect size measure in path models (Garson, 2016). Hock and Ringle (2006) further prescribed some tantative cut-off points for describing R-square are as follows: Results above 0.67 (Substaintial), 0.33 (Moderate) and 0.19 (Weak). Based on these criteria, it can be concluded that physical work environment accounted for a weak positive variance in performance in Efutu Circuit of the Cape Coast Metropolis. This means that the more teachers in Efutu Circuit of the Cape Coast Metropolis enjoy good physical work environment, the more their job performance will be enhanced. Therefore, management of Ghana

Education Service must continue and improve on physical work environment agenda in the schools at Efutu Circuit of the Cape Coast Metropolis because it actually causes employees to improve their performance.

Table 9: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	114.540	1	114.540	8.069	.004[b]
	Residual	1817.030	128	14.196		
	Total	**1931.569**	**129**			

a. Dependent Variable: Teacher Performance

b. Predictors: (Constant): Physical Work Environment

Source: Field survey, Ziadzor (2018)

The result of the ANOVA component of the standard multiple regression analysis is presented on Table 9. A close observation of the Sig. value indicated that the model is statistically significant in that that the p-value (0.004) is less than 0.05. This means that the 13.5% positive variance in the predictors was not due to chance but any scientific interaction among the variables in the model. Management can therefore rely on this model to positively alter teachers' job performance.

Table 10: Coefficients

Model		Standardized Coefficients Beta	T	Sig.
1	(Constant)		23.810	.000
	Physical Work Environment	.244	2.841	.004

Source: Field survey, Ziadzor (2018)

On assessing the contribution of the independent variable contribution to the prediction of the dependent variable, the standardized coefficient Beta value for each of the independent variables was computed. The findings are

provided in Table 10. The findings indicate that the level of performance with physical work environment has strongest unique but statistically significant contribution to explaining the dependent variable when all the other variables in the model are controlled for, with Beta value of 0.244 and corresponding Sig value of 0.004. It thus means higher levels of physical work environment causes a statistically significantly positive changes in teachers' performance in Efutu Circuit of the Cape Coast Metropolis. This implies that the predictor is a genuine predictor of positive change in teachers' performance at Efutu Circuit of the Cape Coast Metropolis since its contribution is not attributed to chance. Thus, the more workers i.e. teachers are satisfied with physical work environment, the more they are likely to put in much effort to enhance their job performance hence, leadership should focus on it to improve their employees' output.

As part of the findings regarding the effect of physical work environment on teacher performance, the study examined the relationship between physical work environment and physical work environment. The findings of the study concentrated on the composite relationship between physical work environment and teacher performance and further looked at the various components of physical work environment (Infrastructure Conditions, Lighting Condition, Ventilation and Noise) and its relationship with Teacher Performance. The finding is presented in Table 11.

Table11: Correlations

		Teacher Performance	**Physical Work Environment**
Teacher Performance	Pearson Correlation	1	.244**

		Sig. (2-tailed)		.004
		N	130	130
Physical Environment	Work	Pearson Correlation	.244**	1
		Sig. (2-tailed)	.004	
		N	130	130

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

Source: Field survey, Ziadzor (2018)

Table 11 indicates the Pearson Product Moment Correlation Coefficient results for the relationship between physical work environment and teachers' Performance. It was discovered that there was statistically significant positive but a weak correlation between physical work environment and teachers' performance ($r=0.244$; $p=0.004$: $p<0.05$). It thus signals that higher levels of physical work environment are associated with higher levels of teachers' performance and lower levels of physical work environment are associated with lower levels of teachers' performance. This finding supports the views collectively held by some empirical studies (Naharuddin & Sadegi, 2013; Oswald, 2012). It must however be recognized that this does not suggest causation in their interrelationships. Thus, per the finding, it can be conclude that whenever physical work environment increases weakly, teachers' performance at Efutu Circuit of the Cape Coast Metropolis also increases weakly although one cannot conclude the changes in physical work environment is the actual cause of such positive weak significant in the likelihood for teachers to work hard at Efutu Circuit of the Cape Coast Metropolis. This converse is also true in this particular instance.

Challenges of Working in a Poor Physical Environment

Again, the study sought to examine the challenges teachers faced in working in a poor physical working environment. A 5-point Likert scale was used to measure the attitude of the respondents, rated as follows: 1= Strongly Disagree; 2= Disagree; 3= Uncertain, 4= Agree and 5= Strongly Agree. The findings are descriptively summarised with mean scores as well as the respective standard deviation.

Table 12: Respondents Who Face Challenges in Working in Poor Physical Environment

		Frequency	Percent
Valid	Yes	130	100.0
	Total	130	100.0

Source: Field survey, Ziadzor (2018)

The finding from Table 12 shows that all the respondents (130) representing 100% indicated that, they are faced with challenge regarding working in a poor physical environment. This implies that the teachers in the schools of Efutu Circuit of the Cape Coast Metropolis are faced with one or two challenges which do not help them to perform their duties up to the expectation.

Table 13: Challenges of Poor Physical Work Environment

	Mean	Std. Deviation
Working in a noisy environment drowns lessons and brings lesson to a halt	4.2154	.93165
Working in a poor physical environment influences our error rate	3.6692	1.24756

Working in a poor physical environment have poor health implications for both teachers and learners	4.2385	1.07692
Working in a poor physical environment encourages teacher absenteeism and truancy	3.6415	1.34195
Working in poor physical environment makes the office and classroom uncomfortable to be stay	4.0846	1.03456
Controlling students in noisy classrooms is relatively difficult	4.1077	1.15635
Poor classroom infrastructure arrangement impedes teachers' movement	4.0462	1.11967
Valid N (listwise)		

Source: Field survey, Ziadzor (2018)

The findings from Table 13 shows that most of the respondents agreed that working in a noisy environment drowns lessons and brings lesson to a halt (M = 4.2154, SD = 0.93165). The respondents also agreed that working in a poor physical environment influences their error rate (M = 3.6692, SD = 1.24756). Again, respondents agreed that working in a poor physical environment have poor health implications for both teachers and learners (M = 4.2385, SD = 1.07692). Similarly, the respondents agreed that working in a poor physical environment encourages teacher absenteeism and truancy (M = 3.6415, SD = 1.34195). Moreover, respondents agreed that working in poor physical environment makes the office and classroom uncomfortable to stay (M = 4.0846, SD = 1.03456). Furthermore, the respondents agreed that controlling students in noisy classrooms is relatively difficult (M = 4.1077,

SD = 1.15635). Finally, the respondents agreed that poor classroom infrastructure arrangement impedes teachers' movement (M = 4.0462, SD = 1.11967).

The result showed that the seven challenges of physical work environment items hindered them (teachers) from working to their expectations due poor physical work environment. The finding is in line with Nakpodia, (2011) who asserted that physical work environment such as overcrowded furniture in classrooms declined the performance of teachers as well as students. Finally, the finding corroborates with that of Tetteh, et al (2012) who disclosed that poor physical environment encourages absenteeism and truancy of teachers as well as students, increases the error rate of teachers and poses some negative consequences on the health of both teachers and students, thereby, reducing their job performance.

Hypotheses Testing

The study tested four hypotheses related to physical work environment (infrastructure conditions, lighting conditions, ventilation and noise) as the independent variables to determine if there is a significant relationship with teachers' job performance. Pearson Moment Correlation Coefficient was used to test the hypotheses. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. The results are presented in Table 14.

Table 14: Hypotheses Testing

Model	R	Sig.	Findings of Hypotheses Tested

Infrastructure Conditions	. 403	.000[b]	Supported
Lighting Condition	.242	.006[b]	Not Supported
Ventilation	.032	.716[b]	Not Supported
Noise	-.128	.145[b]	Supported

Source: Field survey, Ziadzor (2018)

From the decision rule that when the sig value is < 0.05, we reject the null hypothesis and when the sig value is > 0.05, we fail to reject the null hypothesis.

H_1: 'There is a significant positive relationship between infrastructure and teachers' performance '

The correlation analysis from Table 14 indicates that Infrastructure Conditions has a positive significant relationship with employee teachers' performance (R=0.403, p<0.05). Accordingly, hypothesis one (1) which proposes that there is a significant positive relationship between infrastructure and teachers' performance is supported by this study.

H_2: There is a significant positive relationship between lighting and teachers' performance

Again, the findings from the correlation analysis shows that 'lighting' has a positive significant relationship with teachers' performance (R=0.242, p<0.05). Thus, hypothesis 2 is supported by this study.

H_3: There is a significant positive relationship between ventilation and teachers' performance

Moreover, the findings from the correlation analysis shows that ventilation has a positive but insignificant relationship with teachers'

performance (R=0.032, p>0.05). Thus, hypothesis 3 is not supported by this study.

H_4: There is a negative relationship between noise and teachers' performance

Finally, the correlation analysis indicated that noise has a negative relationship with teachers' performance. Moreover, this relationship was insignificant (R=-0.128). Consequently, it can be concluded that hypothesis 4 is supported by this study.

Chapter Summary

This chapter focused on the results of the analyses from field data and assess its related findings taking into consideration the objectives and hypotheses of the study. The findings of the study revealed that, physical work environment has an effect of teachers' performance in the Efutu Circuit of Cape Coast Metropolis. It was also revealed that, there teachers encountered some challenges in working in a poor physical environment.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

In this chapter, an overview of the purpose of study, the research objectives and the research methods employed are presented. The chapter also presents the summary of findings, conclusion based on findings, recommendations as well as suggestions for further studies. The study sought to determine the impact of physical work environment on performance among teachers in Efutu Circuit of Cape Coast Metropolis. The descriptive research design was adopted for the study. Simple random sampling was used in

selecting the respondents for the study. Questionnaire was the main data collection instrument for data collection.

Summary

The summary of the key findings of the research are presented alongside the respective specific research objectives and hypotheses. Regarding the research objective which sought to determine the nature of physical work environment of schools in the Efutu Circuit of Cape Coast Metropolis, it was found that infrastructure conditions as a physical work environment in the schools was good. It was also found that lighting conditions as a physical work environment in the schools was good. Again, it was found that, ventilation as a physical work environment in the schools was good. Moreover, it was found that respondents disagreed that they were affected by noise in their physical work environment. Finally, it was revealed that majority of the respondents indicated that the nature of their overall physical work environment was good.

Concerning the objective which sought to examine the effect of physical work environment on teacher's performance, it was found that the model (Physical Work Environment) explains 15.9% per cent of the variance in predicting the dependent variable (Teacher Performance). The results of the ANOVA showed that a close observation of the Sig. value indicated that the model is statistically significant, in that, the p-value (0.004) is less than 0.05. It was also found that physical work environment has a weak positive relationship on teacher performance.

Regarding the objective which sought to examine the challenges teachers faced in working in a poor physical working environment, it was found that working in a noisy environment drowns lessons and brings lesson to a halt. It was also found that working in a poor physical environment influences our error rate. Again, it was found that working in a poor physical environment have poor health implications for both teachers and learners. Moreover, it was found that working in a poor physical environment encourages teacher absenteeism and truancy. Furthermore, it was found that, working in poor physical environment makes the office and classroom uncomfortable to be stay. Additionally, it was found that controlling students in noisy classrooms is relatively difficult. Lastly, it was found that poor classroom infrastructure arrangement impedes teachers' movement.

Considering the objective which sought to provide measures/ strategies to mitigate the challenges faced by teachers in working in poor physical environment, it was found that provision of adequate infrastructure, proper maintenance culture, proper office and classroom layout and availability of adequate teaching and learning materials were the measures that need to be implemented to mitigate the challenges of working in poor physical environment.

Conclusion

This study provided an overview and relevant discussion on physical work environment and teachers' performance at Efutu Circuit of Cape Coast Metropolis. In order to achieve the objectives of the study, 130 respondents were sampled to respond to questionnaires on various indicators physical work

environment, teacher's performance and challenges of physical work environment at Efutu Circuit of Cape Coast Metropolis.

From the findings of the study, it was concluded that the physical work environment of teachers in schools in the Efutu Circuit of Cape Coast Metropolis is generally satisfactory and good and this positively affects their performance.

The study also showed that there is a statistically significant positive but weak correlation between physical work environment (infrastructure codition, lighting condition, ventilation and noise) and teachers' performance Efutu Circuit of Cape Coast Metropolis. This revealed that when the management of GES maintain and improve on the physical work environment currently in use in the schools in the Efutu Circuit of Cape Coast Metropolis, performance of teachers would increase.

For the challenge's teachers faced in working in a poor physical working environment at Efutu Circuit of Cape Coast Metropolis, this study releaved that all the respondents (130) representing 100% indicated that, they are faced with challenges regarding working in a poor physical environment. This implies that the teachers in the schools of Efutu Circuit of the Cape Coast Metropolis are faced with one or two challenges which does not help them to perform their duties up to the expectation.

Recommendations

Based on the findings of the study, the following recommendations are being offered for the management of GES and various schools in Efutu Circuit

of Cape Coast Metropolis to act on these recommendations to achieve desired results.

Teachers in Efutu Circuit of Cape Coast Metropolis showed that they satisfied with the infrastructure conditions at the workplace. The study therefore recommends that management of GES and various schools in Efutu Circuit of Cape Coast Metropolis should maintain and continue this implementation since it actually enhances teacher's performance. Again, to ensure that there is an adequate lighting condition, the management of schools should ensure that, more electric bulbs as well as its accompanying electrical switches are installed to augment the natural lights enjoyed in classrooms and offices. Also, they agreed that there is overcrowding at workplace and they (teachers) disagreed that their offices and classroom are free from odour, stuffy air and dust. The study therefore recommends that management of GES and various schools in Efutu Circuit of Cape Coast Metropolis should lay down a proper layout of offices and classrooms mitigate working in poor physical environment therein, ensuring free movement of employees (teachers) at workplace to help them carry out their duties to achieve the desired result. Again, management should put in place proper measures to make sure the offices and classroom of teachers are free from odour, stuffy air and dust.

There was a statistically significant positive but weak correlation between physical work environment (infrastructure codition, lighting condition, ventilation and noise) and teachers' performance Efutu Circuit of Cape Coast Metropolis. The study therefore recommends that management of schools in Efutu Circuit of Cape Coast Metropolis should improve and

continue to use those physical work environment indicators to improve or sustain the performance of teachers at the workplace.

All teachers at Efutu Circuit of Cape Coast Metropolis agreed that poor physical work environment prevent them from given off their best thereby rendering their level of performance, very low. The study therefore recommends that management of GES and schools in Efutu Circuit of Cape Coast Metropolis should therefore lay down proper measures in place to ensure that the physical work environment of teachers is in good shape since poor physical work environment cut down performance of teachers.

Suggestion for Further Studies

The researcher strongly suggests that a replica study be conducted in schools, especially private schools. This help to do a better comparison of results. Likewise, there is the need for further empirical studies to be conducted in other metropolis since the study was limited to the Cape Coast Metropolis and as such not all factors may have been examined. This will lead to the broadening of knowledge and scope in the area of physical work environment.

Another study can also be conducted to analyse the effect of physical work environment on teachers' performance, using job satisfaction as the mediating role. Finally, the current study resorted to quantitative research methodology to gather information from the respondents. However, if this research will be done by using mixed methodology (questionnaires and interviews), more thought-provoking results could be examined from the perspective of respondents.

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QUESTIONNAIRE

PHYSICAL WORK ENVIRONMENT AND ITS IMPACT ON TEACHERS' PERFORMANCE: A CASE STUDY OF SCHOOLS IN EFUTU CIRCUIT OF THE CAPE COAST METROPOLIS.

This research is being conducted by Miss Priscilla Yayra Ziadzor to determine the impact of physical work environment on teachers' performance in schools in the Efutu Circuit of the Cape Coast Metropolis. The research is purely for academic purpose and any information you provide will be held confidential. Your anonymity is assured as well. Appropriate authorization has been sought and I believe you will give the needed information to make this study a success. Thank you.

INSTRUCTIONS: Kindly write or tick (√) where appropriate

Section A: Background Information

1. Age
   (a) Below 25 years [ ] (b) 25-30 years [ ] (c) 31-35 years [ ]
   (d) 36-40 years [ ] (e) 41-45 years [ ] (f) over 45 years [ ]
2. Gender
   (a) Male [ ] (b) Female [ ]
3. Educational Level
   (a) Diploma/HND [ ] (b) First Degree [ ] (c) Masters [ ]
   (d) PhD. [ ]
4. Marital status
   (a) Married [ ] (b) Single [ ] (c) Separated [ ]
   (d) Divorced [ ] (e) Widowed [ ]

5. Indicate your rank…….

6. How long have been working as a teacher?

(a) 1 – 5 years [ ] (b) 6 – 10 years [ ] (c) 11 – 15 years [ ]

(d) 16 – 20 years [ ] (e) 21 years and above [ ]

Section B: Physical Work Environment

6. The following statements are related to physical work environment. To what extent do you agree with the following statements? **Where 1= Strongly Disagree; 2=Disagree; 3=Uncertain; 4=Agree and 5=Strongly Agree**

No.	Statements	1	2	3	4	5
	Infrastructure Conditions					
IC1	Teachers have adequate furniture (chairs and tables) to work with					
IC2	The teachers' furniture are in good condition					
IC3	Our offices and workspaces are well designed					
IC4	The layout of the offices and workspaces here are good					
	Lighting Conditions					
LC1	Ample amount of natural light comes into the classroom and offices.					
LC2	There are enough electric bulbs in the offices and classrooms					
	Ventilation					
V1	There are enough windows in the offices and classrooms					
V2	Teachers have access to natural or artificial air in offices and classrooms					
V3	Our offices and classrooms are free from odour, stuffy air and dust					

V4	There is overcrowding at my workplace					
	Noise					
N1	The school is situated in a quiet environment					
N2	The school has many noise distractions (moving vehicles, market women, church or households)					
N3	Lessons in other classrooms distracts my lessons					

7. Overall, how would you describe your physical work environment?

(a) Very bad [ ] (b) Bad [ ] (c) Moderate [ ]

(d) Good [ ] (e) Very good [ ]

Section C: Teacher's Performance

8. The following statements are related to physical work environment. To what extent do you agree with the following statements? **Where 1= Strongly Disagree; 2=Disagree; 3=Uncertain; 4=Agree and 5=Strongly Agree**

No.	**Statements**	**1**	**2**	**3**	**4**	**5**
P1	I attend the class on time					
P2	I make scheme of work every term					
P3	I always prepare lesson plan for the lessons to be taught					
P4	I usually provide exercises and homework to students					
P5	I always report to school on time					
P6	I always correct students' work					
P7	I usually keep records of students' progress					
P8	I supervise extra-curricular activities effectively					
P9	I always leave the school after working hour					
P10	I always cover the syllabus on time					

Section D: Challenges of Poor Physical Work Environment

9. Do you encounter challenges when working in a poor physical environment?

   (a) Yes [ ] (b) No [ ]

10. If yes to Question (9), then to what extent do you agree with the following statements:

Where: **1=Strongly Disagree; 2= Disagree, 3= Uncertain; 4= Agree; 5= Strongly Agree**

No.	Statements	1	2	3	4	5
C1	Working in a noisy environment drowns lessons and brings lesson to a halt					
C2	Working in a poor physical environment influences our error rate					
C3	Working in a poor physical environment have poor health implications for both teachers and learners					
C4	Working in a poor physical environment encourages teacher absenteeism and truancy					
C5	Working in poor physical environment makes the office and classroom uncomfortable to be stay					
C6	Controlling students in noisy classrooms is relatively difficult					
C7	Poor classroom infrastructure arrangement impedes teachers' movement					

11. In your opinion, what other challenges do you encounter when working in a poor physical work environment?

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12. What measures can be put in place to mitigate the challenges of poor physical work environment in the school?

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