

Chapter One

Introduction

1.1 Background to the Study

Human beings are the wheels upon which the vehicle of an organization moves in spite of the invention of machines and robots. The health and wellbeing of workers are most times sidelined by employers having forgotten that these humans are responsible for the achievements of set organizational objectives hence the reason the work should be made meaningful, valuable, comfortable and safe for employees. In a competitive organizational environment, high-performance employees are needed in order to enhance organizational productivity. The health and safety of employees are to be of significant concern to employers and therefore need be paid adequate attention to.

Recent surveys among office employees across the globe revealed the fact that employees' occupational health and safety have suffered some decline¹. Reviewed statistics on occupational accidents, hazards, injuries, diseases, time loss, law suits and many others revealed that more than 2.3 million people die as a result of occupational accidents or work-related diseases per year and 317 million accidents occur on the job annually around the world². Another 221,366 occupational accidents, 494 occupational diseases and 1,626 fatal occupational accidents were reported in Turkey in 2014³. Recently, it has been estimated that work days lost to occupational safety and health-related causes represent almost four percent of global GDP, and some six percent in some countries while the greatest proportion of current work-related deaths, 86 percent come from occupational-related diseases⁴. This has been an eye-opener to some observed general loss of job satisfaction among office workers, and in particular, secretaries in ICT Polytechnics, Ogun State, Nigeria.

Job satisfaction represents a combination of positive or negative feelings that workers have towards the work as an employed worker brings with him or her certain needs, desires and/or experiences with the expectations of being met as job satisfaction represents the extent to which expectations match the real goals. Job satisfaction is a worker's sense of achievement and success on the job for it is closely linked with an individual's behaviour in the work place. It is generally perceived to be directly linked to productivity as well as to employee's personal well-being⁵. Job satisfaction also implies doing a job one enjoys, doing it well and being rewarded for one's efforts. Job satisfaction further implies enthusiasm and happiness with one's work, hence, it is the key ingredient that leads to recognition, income, promotion, and the achievement of other goals that lead to a feeling of fulfillment⁶.

The job satisfaction of employees is important in all organizations, but its importance increases in educational institutions (polytechnics in particular) for the reason of the pivotal role played by the secretaries of polytechnics in creating as well as maintaining the records and data capable of enhancing the institutions' operations. Thus, secretaries play salient roles in the day-to-day running of and contributing to the advancement of the institutions in terms of records collection, organizing, processing and maintaining of information needed for efficient and effective management. Having particularly observed the secretaries in ICT Polytechnics Ogun State, Nigeria, noting different factors which could be accrued to their job satisfaction or dissatisfaction, the Abraham Maslow's Hierarchy of Needs will be used to measure the job satisfaction of this category of office workers. Another crucial ingredient that could smoothen secretarial/office duties and enhance job satisfaction among secretaries of ICT Polytechnics, Ogun State, Nigeria is Office Ergonomics.

Ergonomics as a field of study reflects a shift in emphasis from observation of trial-and-error human experience to the placing of greater reliance upon controlled and systematic research⁷. Such researches are carried out in the area of workplace designs, equipment control (man-machine) and environmental conditions. Office Ergonomics is the scientific study of the interaction between people and the tools being used in performing the job⁸. The goal of office ergonomics is to set up the office work space to fit the employee and the job. The presence of office ergonomics is meant to ensure the comfort, health and wellness of office employees but reverse is the case in most offices. Office ergonomics means fitting the task to the person as it improves health and safety, reduces costs from absenteeism cum reduced productivity, and outrightly ensuring that the social and legal obligations of employers to their employees are being met. Office ergonomics is about 'fit': the fit between office secretaries, their routine office activities, the equipment they use and the environment wherein they work, move and play.

An office is a place where administration, that is, the management and handling of information takes place⁹. An office is that part of an organization which provides all kinds of information required for efficient management and control of the operations of the entire organization. Secretaries therefore, are persons who perform the functions of an office which include information-related (routine or basic) functions as well as administrative or management functions. Office ergonomics, which is the interaction between office secretaries, the office environment and other office equipment, sets out to achieve its prime rule of safety first, for secretaries on their jobs, then the students, staff and visitors. Similarly, when a good fit is achieved, the stresses on workers are no doubt reduced as they become more comfortable, perform their jobs more speedily, easily and record fewer as well as lesser mistakes¹⁰. For the purpose of this study, office ergonomics will be measured using office environment, workplace

comfort and office safety and security. There is no gainsaying that occupational health and safety influences to a great extent the concept of positive safety culture in any work environment. The acceptable levels of safety are difficult to specify, the ideal situation is 'perfect safety' when the probabilities of some occurrences are so small that they can be ignored. The Safety Culture of an organization reflects the broad spectrum of established safety-related human, organizational or contextual, and technological aspects prevailing in the entire organization¹¹. It entails observable, tangible factors, the physical working environment and how individuals behave in relation to safety management in an organization. In addition, it entails non-observable, less tangible factors, being the values and attitude of individuals in relation to safety, and the shared perceptions of safety. All these safety-related aspects interact with each other in a dynamic way. The Safety Culture encapsulates beliefs, values, and attitudes that are shared within the secretaries of ICT Polytechnics in Ogun State and the management. As human behaviours (and thus at an individual level, safe or unsafe behaviours) are partly guided by personal beliefs, values, and attitudes, continued workplace safety may have its base in individually, and organizationally constructed shared beliefs that safety is important¹². The safety culture of an institution is the product of both individual and group values, attitudes, perceptions, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of, an institution's health and safety management¹³. Institutions with a safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures¹⁴. Psychological, situational and behavioural factors derived from the Pathogen Model¹⁵ safety culture for this study.

1.2 Statement of the Problem

Many a time, office job is viewed in a quite different light from industrial, production or construction jobs as such with lesser stress, hazards and therefore greater job satisfaction. Meanwhile, this is not always the true picture as some secretaries are found to be working in humid, badly-lighted offices, tensed office environment surrounded by the wasted efforts inevitably fostered by poor office layout resulting from the existence of no safety mindset. Alternatively, preliminary investigation and close observation revealed a decline in the job satisfaction of secretaries in ICT Polytechnics in Ogun State, Nigeria. This job dissatisfaction as observed, could be fuelled by inefficient office arrangement, office environment, the repetitive and routine nature of the office work in addition to its resultant effect on the account of recorded hazards relating to sitting for too long, fatigue, injuries, office accidents, disorders, non-availability of advanced office tools and equipment, poor technology and the absence of safety culture at work among others. All these inefficiencies tend to have ripple effects of delay in the discharge of duties of these secretaries which invariably downplay their job satisfaction.

Nevertheless, empirical studies that combined the two variables within the context of secretaries' job satisfaction in ICT Polytechnics in Ogun State seem scarce. The few studies previously conducted have focused on other contexts; for example studies not based on ICT institutions but on other organizations, hence reinforcing the narrative that there is need for a study that would substantiate the interaction between office ergonomics and safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. This study therefore intends to investigate the influence of office ergonomics and safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

1.3 Aim and Objectives of the Study

The aim of the study is to investigate the influence of office ergonomics and safety culture on the job satisfaction of secretaries of ICT Polytechnics, Ogun State, Nigeria. The objectives of this study are to:

- i. identify the level of job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria;
- ii. determine the office ergonomics in place for secretaries in ICT Polytechnics, Ogun State, Nigeria.
- iii. determine the prevalent safety culture existing in ICT Polytechnics, Ogun State, Nigeria.
- iv. determine the influence of office ergonomics on the job satisfaction.
- v. determine the influence of safety culture on the job satisfaction.
- vi. ascertain the combined influence of office ergonomics and safety culture on the job satisfaction of the secretaries in ICT Polytechnics, Ogun State, Nigeria.

1.4 Research Questions

The following research questions will guide the study:

- i. What is the level of job satisfaction of secretaries in Polytechnics, Ogun State, Nigeria?
- ii. What are the office ergonomics in place for secretaries in ICT Polytechnics, Ogun State, Nigeria?
- iii. What is the prevalent safety culture in ICT Polytechnics, Ogun State, Nigeria?

1.5 Research Hypotheses

The following hypotheses are formulated to guide the study and will be tested at 0.05 level of significance.

H₀₁: There will be no significant influence of office ergonomics on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

H₀₂: There will be no significant influence of safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

H₀₃: There will be no combine influence of office ergonomics and safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

1.6 Significance of the Study

This research work is expected to be beneficial to secretaries, staff and management of all ICT Polytechnics in Ogun State, Nigeria, organizations, Human Resource Managers, researchers, policymakers in government as well as being a form of contribution to knowledge. This research work would seek to attend to the perceived poor state of office ergonomics in ICT Polytechnics in Ogun State and would help the staff and management of various institutions to understand and address the issues pertaining to the safety of staff in the Polytechnics especially that of secretaries. Secretaries in the same light as Human Resources Managers would identify areas to be addressed to improve job satisfaction such as provision of the right and up-to-date office equipment in a good office environment, ensuring comfort plus ease while performing tasks and ascertaining safety while on the job. The findings of this study would also aid improvement on human resource management policies and practices. Conclusively, it will serve as a link and

guide for future researchers of related study as they make use of this material for references. Policymakers in government would benefit from the findings of this study by having useful input in formulating policies that are relevant to employees' needs.

1.7 Scope of the Study

The study is limited to office ergonomics and safety culture of corporate organizations as they relate to the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. Nonetheless, preliminary investigation coupled with review of literatures have all given the measures of job satisfaction to be physiological needs, safety and security needs, social needs, respect and self-esteem. The measures for office ergonomics are office environment, office tools and safety/security in the office; while the measures used for safety culture are psychological safety, situational safety and behavioural safety. The geographical scope will cover Gateway (ICT) Polytechnic, Saapade, Abraham Adesanya (ICT) Polytechnic, Ijebu – Igbo, D.S. Adegbenro (ICT) Polytechnic, Itori and Gateway (ICT) Polytechnic, Igbesa. The respondents of the study will be secretaries from the four ICT Polytechnics.

1.8 Limitation of the Study

The limitation of the study is the lost of some questionnaire for which new ones needed to be printed to replace the lost ones.

1.9 Operational Definition of Terms

Job satisfaction: The pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values and the extent to which secretaries working in ICT Polytechnics, Ogun State, Nigeria like or dislike their jobs or individual aspects or facets of jobs.

Physiological Needs: These are the needs that have to be satisfied for the continuation of secretaries in ICT Polytechnics, Ogun State, such as taking in of oxygen, eating, drinking, sleeping, resting and sheltering.

Safety and Security Needs: This is the provision of a safe working environment, safe equipment, policies and procedures in order to ensure the health and safety of secretaries of ICT Polytechnics, Ogun State, Nigeria.

Self-Esteem Needs: This is a situation whereby needs are to be appreciated and respected by others related to the reputation of secretaries in ICT Polytechnics, Ogun State, Nigeria, such as status, recognition, and appreciation.

Ergonomics: The scientific discipline concerned with the understanding of interactions among humans (secretaries) and other elements (physical working environment) of ICT Polytechnics, Ogun State, Nigeria.

Office Ergonomics: This comprises the physical condition of ICT Polytechnics, Ogun State, Nigeria that must be unavoidably present in an office before such office could be said to be conducive for workers to operate in.

Office Environment: The general physical and emotional space in which secretaries of ICT Polytechnics, Ogun State, Nigeria perform their daily duties.

Workplace Comfort: This is a situation in which secretaries of ICT Polytechnics, Ogun State, Nigeria feel at ease while going about their jobs.

Office Safety: This refers to the working environment in ICT Polytechnics, Ogun State, Nigeria devoid of factors impacting health, well-being and safety of the office workers.

Safety Culture: Safety Culture of ICT Polytechnics, Ogun State reflects the broad spectrum of established safety related to human, organizational or contextual, and technological aspects prevailing in the entire Polytechnics.

Psychological Safety Factor: Psychology safety is a climate in which secretaries of ICT Polytechnics, Ogun State are comfortable expressing, sharing concerns and mistakes without fear of embarrassment or retribution, they are confident that they can speak up without being humiliated, ignored or blamed.

Situational Safety Factor: It is the ratio of the ultimate stress of the component material in ICT Polytechnics, Ogun State to the working stress of their Secretaries.

Behavioural Safety Factor: This is the function of the consequences of behaviour and these make behaviours strongly associated with learning among the secretaries in ICT Polytechnics, Ogun State.

Secretaries: These are administrative professionals who play integral roles in business and other organizational environments. They handle correspondences, keep records and do general clerical and secretarial work in ICT Polytechnics, Ogun State, Nigeria.

Polytechnic: An institution of higher education offering courses at degree level or below, especially in vocational and technical subjects.

ICT Polytechnics: These are tertiary institutions of higher education offering courses at degree level or below, especially in vocational and technical subjects as well as offering additional certificate in Information and Communication Technology (ICT).

Office: An office is the information hub and the intelligence center for coordinating vital activities in ICT Polytechnics, Ogun State, Nigeria. It is still the overseer of office furniture, machines and supplies for all or most of the firm.

Do Not Copy, Lead City University, Nigeria

Endnotes

1. Z. K. Quible *Administrative Office Management: An Introduction*, 8th ed. Upper Saddle River, USA: Prentice-Hall Inc., 1996
2. O.C. Wasonga, "A study of Motivational and Job Satisfaction needs of public Secondary Schools," Unpublished Med The is, University of Nairobi 2004,
3. S. R., Kessler, L., Lucianetti, S.Pindek, , Z., Zhu, & P. E. Spector, *Job satisfaction and firm performance: Can employees' job satisfaction change the trajectory of a firm's performance?. Journal of Applied Social Psychology*, 50(10), 2020. 563-572.
4. J. Y., Lim, K.-K., Moon, & R. K. Christensen, *Does psychological empowerment condition the impact of public service motivation on perceived organizational performance? Evidence from the US federal government. International Review of Administrative Sciences* 2021.
5. A. Maslow, *Motivation and Personality*, Harper and Row: New York. 1954
6. E. K. Mocheche, J. Bosire, & P. Raburu, *Influence of self-esteem on job satisfaction of secondary school teachers in Kenya. International Journal of Advanced and Multidisciplinary Social Science*, 3(2): 2017. 29-39.
7. N., Dutta, T., Walton, & M. A. Pereira, *One-year follow-up of a sit-stand workstation intervention to decrease sedentary time in office workers. Preventive Medicine Reports*, 13, 2019, 277–280.
8. Y. W. Awodi, *Polytechnic education in Nigeria: Opportunities for wealth and job creation, the journey so far. 24th Convocation Lecture, at the Federal Polytechnic, Idah, Kogi State, Nigeria*, May 11, 2019. 2019
9. O. James , *Effect of Office Ergonomics on Office Workers' Productivity in the Polytechnics, Nigeria, Journal of Education and Practice*. 2021
10. M. Halaj, M. Boros, & R. Jankura, *Charakteristics, description and assessment of the organization's safety culture subsectors*. In: CBU International Conference Proceedings:

- International conference on Innovations in Science and Education. Czech Republic: Prague: CBU, 2019. pp 428–434.
11. M., Halaj, & L. Hofreiter, *Methods of security culture assessment. In: 10th International Conference on Education and New Learning Technologies: EDULEARN18 Proceedings.* Spain: Palma, 2018, pp. 3958–3966.
 12. M. D. Cooper, *Towards a Model of Safety Culture.* **Safety Science**, 36, 2000, 111-136
 13. M. Ashutosh, *Exploring the antecedents, drivers, and outcome of Behaviour-based safety: A literature review, Article in Psychology (Savannah, Ga.), Pandit Deen Dayal Energy University.* 2021
 14. A. Osman, K. Khalid, & F. Mohsen AlFqeeh *Exploring The Role Of Safety Culture Factors Towards Safety Behaviour In Small-Medium Enterprise,* **International Journal of Entrepreneurship.** 2019
 15. W. Esterhuizen, & N. Martins, *The factor structure of a safety leadership assessment tool for the mining industry.* **Journal of Contemporary Management**, 13: 2016. 1-26.

Chapter Two

Literature Review

This chapter reviewed related literature to the area of study (Office Ergonomics, Safety Culture and Job Satisfaction of Secretaries) for a broader understanding of the research problem. The chapter is presented under the following headings:

2.1 Conceptual Review

2.1.1 Concept of Job Satisfaction

2.1.2 Concept of Office Ergonomics

2.1.3 Concept of Safety Culture

2.2. Theoretical Framework

2.2.1 Maslow's Hierarchy of Needs

2.2.2 Ecological Theory of Ergonomics

2.2.3 Reciprocal Safety Culture Model

2.3 Review of Empirical Studies

2.3.1 Office Ergonomics and Job Satisfaction

2.3.2 Safety Culture and Job Satisfaction

2.4 Conceptual Model

2.5 Summary of Literature Reviewed

Endnotes

2.1 Conceptual Review

2.1.1 Concept of Job Satisfaction

Work is a central part of almost every individual's life. Adults devote almost all of their waking time to work as career development makes up almost 70% of human developmental tasks. Job satisfaction is an achievement indicator in career developmental task, hence, it is important that employees feel a sense of satisfaction with their job else frustration might set in, anger and in some cases depression. Perceived satisfaction on the job is reflected by the sense of expectation and fulfillment for the job to be interesting, challenging and personally satisfying. There are numerous studies on job satisfaction and the results are often valued for both humanistic and financial benefits. When employees are satisfied, they tend to care more about the quality of their work, they are more committed to the organization they serve, they have higher retention rates and they are generally more productive. The modern times are highly competitive and hence, there are lots of pressures for each organization to be the best, for this reason, organizations tends to demand for better job outcomes. In fact, our recent times have been called "the age of anxiety and stress".

Job satisfaction is one of the most popular and most researched variables in the occupational and organizational psychology. Job satisfaction is any combination of psychological, physiological and environmental circumstances that cause a person to truthfully say I am satisfied with my job. Job satisfaction although is under the influence of many external factors, it remains something internal that has to do with the employee's feelings. Job satisfaction presents a set of factors that can cause a feeling of satisfaction as it represents a combination of positive or negative feelings that workers have towards their work¹. Meanwhile, a worker who is employed in an organization brings with him or her, the needs, desires and experiences with the expectation of such being met. Job satisfaction represents the extent to which expectations are and match the real awards

surrounding the job. Job satisfaction is equally closely linked to an individual's behaviour in the work place.

Job satisfaction is a worker's sense of achievement and success on the job. It is generally perceived to be directly linked to productivity as well as to personal well-being. Job satisfaction implies doing a job one enjoys, doing it well and being rewarded for one's efforts. Job satisfaction further implies enthusiasm and happiness with one's work. Job satisfaction is the key ingredient that leads to recognition, income, promotion, and the achievement of other goals that lead to a feeling of fulfillment². Job satisfaction can also be defined as the extent to which a worker is content with the rewards he or she gets out of his or her job, particularly in terms of intrinsic motivation³. The term job satisfaction refers to the attitude and feelings people have about their work. Positive and favorable attitudes towards the job indicate job satisfaction. Negative and unfavorable attitudes towards the job indicate job dissatisfaction³. Job satisfaction is the collection of feeling and beliefs that people have about their current job.

Individual's level or degrees of job satisfaction can range from extreme satisfaction to extreme dissatisfaction. People also can have attitudes about various aspects of their jobs such as the kind of work they do, their co-workers, supervisors or subordinates and their pay. Job satisfaction is a complex and multifaceted concept which can mean different things to different people. Job satisfaction is usually linked with motivation, but the nature of this relationship is not clear. Satisfaction is not the same as motivation. Job satisfaction is more of an attitude, an internal state. It could, for example, be associated with a personal feeling of achievement, either quantitative or qualitative⁴.

Job satisfaction can be considered as one of the main factors when it comes to efficiency and effectiveness of an organization. In fact the new managerial paradigm which insists that

employees should be treated and considered primarily as human beings that have their own wants, needs, personal desires is a very good indicator for the importance of job satisfaction in contemporary companies. When analyzing job satisfaction the logic that a satisfied employee is a happy employee and a happy employee is a successful employee⁵.

Job satisfaction is considered as a reason for organizational commitment. The reverse is also applicable where organizational commitment is a cause to job satisfaction. When an employee is satisfied with the job the employee becomes more committed to the organization and vice versa. In other words, job satisfaction can be measured and assessed by organizational commitment and vice versa⁶. Job satisfaction is “the collection of feelings and beliefs that people have about their current jobs. People’s levels of job satisfaction can range from extreme satisfaction to extreme dissatisfaction” Others have defined job satisfaction as “a positive feeling about a job resulting from an evaluation of its characteristics”. It was defined it as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences”. Job satisfaction is the employee’s mental classification of job into objective and subjective characteristics.

Intrinsic job satisfaction is how people feel about the nature of the job tasks themselves, whereas extrinsic job satisfaction is how people feel about aspects of the work situation that are external to the job tasks or work itself⁶. In the industrial psychology literature, job satisfaction is noted as the positive emotional level gained by the employee when the employee gets a job appraisal. In terms of factors affecting job satisfaction, employees’ personal and job characteristics determine job satisfaction. Highly educated employees are more likely to suffer from educational mismatch”. Furthermore, the higher the level of education of employees is the lower their satisfaction. Although, having higher education raises the expectancy of having better job which leads to dissatisfaction and disappointment, it was reported that no significant effects of

education level on overall job satisfaction. Job satisfaction is influenced by the level of pay and performance, employee benefits, training, recruiting, learning curve inefficiencies, reduction in the client base, job design, life satisfaction, autonomy, growth satisfaction, satisfaction with co-workers, satisfaction with supervisors and customer satisfaction⁷.

Further, job satisfaction is a cognitive and affective appraisal of a job viewed as a construct conceptualized in terms of beliefs and feelings regarding one's job. In terms of the significance of job satisfaction on organizations and employees, more satisfied employees will add more value to the organization. Past studies in Europe and the USA proposed that job performance is positively influenced by employees' job satisfaction⁸. Finally, Job satisfaction creates a pleasant feeling that directs to a positive work attitude. A satisfied employee is more likely to be creative, flexible, innovative and loyal. Furthermore, Job satisfaction can be used as a broad assessment of "an employee's attitudes of overall acceptance, contentment, and enjoyment in their work".

Job satisfaction has been defined as "feelings or affective responses to facets of the (workplace) situation"⁹. More recently, researchers have acknowledged that job satisfaction is a phenomenon best described as having both cognitive (thoughts) and affective (feelings) character. Employee reports of affect at work can be used to measure job satisfaction and that affective experiences while on the job are also a cause of job satisfaction. In other words, employee job satisfaction is the affective state of employees regarding multiple facets of their jobs, so job satisfaction comprises employee feelings and actions regarding multiple aspects of the job. There is also a cognitive component to job satisfaction. This cognitive component is made up of judgments and beliefs about the job whereas the affective component comprises feelings and emotions associated with the job.

Job satisfaction is the attitude and feeling employees have towards their job. The feelings and attitudes are divided into two categories which are the positive and negative attitudes. Pleasant feelings and Positive attitudes tend to show that employees are satisfied 'while negative and unpleasant feelings exhibit dissatisfaction of employees. Job performance is "the total expected value to the organization of discrete behavioral episodes that an individual carries out over a standard period of time", Usually employees who are able to perform better will have higher priorities in being hired compared to those low performers. A great effort is necessary for the employees to attain high performance in jobs. When the employees are satisfied with their jobs, they tend to be motivated, are willing to put more effort and commit more in their jobs. This then leads to the attainment of the organization goals. In simple words, employees' job satisfaction plays an important role towards the successfulness of an organization, particularly in achieving higher level of employee's job performance. Therefore, achieving a high level of employee performance is considered the common goal for many organizations, hence the need to look for the compelling factors that lead to this performance i.e. job satisfaction¹⁰.

Job satisfaction is a positive emotional state that comes from the feeling of pleasure that an employee finds from his or her current job. Job satisfaction is "simply how people feel about their jobs and the different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs". Job satisfaction is also being viewed as the "pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's values"¹¹. It was further added that it's an emotional state that is obtained from the experiences in performing the job. Task performance is "the proficiency with which job incumbents perform activities that are formally recognized as part of their jobs; activities that

contribute to the organization's technical core either directly by implementing a part of its technological process, or indirectly by providing it with needed materials or services".

Job satisfaction is a collection of feelings and beliefs that people have about their current jobs. People's levels or degrees of job satisfaction can range from extreme satisfaction to extreme dissatisfaction. In addition to having attitudes about their jobs as a whole, people also can have attitude about various aspects of their jobs such as the kind of work they do, their coworkers, Supervisors, subordinates, and their pay". Belief and attitudes were added to various aspects or dimensions of job in addition to the emotional state¹². The term job satisfaction refers to an individual's general attitude towards his or her job. A person with a high level of job satisfaction holds positive attitudes toward the job, while a person who is dissatisfied with his or her job holds negative attitudes about the job.

There are different factors that affect job satisfaction some of which are personal while some others are organizational factors. A scholar stated four factors that affect the level of job satisfaction a person experiences: personality, values, the work situation and social influence¹³. Work situation includes the work itself, co-workers, supervisors and subordinates, physical working condition, working hours, pay and job security. Work itself is the most important factor and source of job satisfaction. "An extensive review of the literature indicates that the more important factors conducive to job satisfaction are mentally challenging work, equitable rewards, supportive working condition and supportive colleagues". Pay and promotion is equitable reward facet while supervision is another one factor¹⁴. There are a number of factors that influence job satisfaction and through the years, five dimensions have been identified to represent the most important characteristics of a job about which employees have affective responses: the work itself, pay, promotion opportunities, supervision and co-workers¹⁵.

It was stated in the conceptual framework that personal factors such as gender, education, experiences and management level are positively related to job satisfaction and job satisfaction is affected by pay and promotion, organizational policy, supervisor's attitude, working condition and co-workers' behaviours¹⁶. The contention is that a satisfied employee has a better attitude to work than a dissatisfied one. It was once believed that satisfaction would lead to higher productivity but conversely, research findings point to the fact that a satisfied employee is not necessarily productive thus; there is no consistent correlation between productivity and job satisfaction. Studies however, show that job satisfaction correlates negatively with increased absenteeism rate, labour turnover and poor morale.

Commenting on the lack of correlation between employee satisfaction and productivity, a scholar observed that no significant relationships were discovered between any of the indexes of satisfaction and the productivity of the work group. In other words, employees in highly productive work groups were no more likely than employees in low producing group to be satisfied with their job and the company, or with their financial and status reward. These studies consistently point out that a satisfied employee does not out-produce an unsatisfied employee but they do not claim that satisfaction is the cause of low productivity or poor attitude to work. A satisfied and motivated employee is an ideal employee knowing fully well that what satisfies employees are many and varies. Factors such as gender, position, personal characteristics of the job holder, level of education, income level, supervision, relationship with co-workers, size of the work group, job content, to mention but a few, are some of the major factors that influences employees' job satisfaction. Employee's job satisfaction is influenced by the equitable distribution of organizational approbations as perceived inequity affects employee's job

satisfaction. The ability of an employee to perform his work up to expected standards rather influences his or her job satisfaction¹⁷.

An employee who is capable of performing an assigned task derives intrinsic rewards from it, as he is capable of accomplishing something. He sees himself as having some control over his environment and may perceive himself as an achiever. This reward increases when the organization recognizes his contribution and gives him added incentives in the way of promotion or other privileges. If the employee believes that what he receives is equal to what other employees who have achieved similar level of productivity are entitled to, satisfaction is then derived. Extrinsic rewards include all forms of formal recognitions, promotions, advancement, pays, amenities, fringe benefits, and a pat on the back, all of which originate from the organization. Intrinsic rewards are the internal feelings of satisfaction originating from work well done, achievement, personal growth, status or possessed power and informal recognition. This inner warmth in a form of self-gratification is very sustaining as many employees will stay in an organization even if denied extrinsic rewards but possess intrinsic rewards. Where the latter is lacking, the employee is very likely to leave the organization, or become very tardy, play truancy and characteristically, show a very poor attitude to work. Job satisfaction from this perspective is very closely related to absenteeism and labour turnover¹⁸.

Job satisfaction is imperative since it influences absenteeism alongside tardiness and to a large extent, turnover of labour but not performance. It costs lots of money to recruit and train employees, therefore, no company can survive continuous high turnover of employees or unexcused absenteeism. Job satisfaction affects staff turnover to an extent because turnover is also influenced by the availability of alternative job opportunities. A dissatisfied employee does not resign his position unless another equally attractive position is available. Other factors of job

satisfaction are physiological needs, safety and security needs, social needs, respect and self-esteem as derived from Maslow's Hierarchy of Needs¹⁹.

Physiological Needs: Self-Determination Theory (SDT) is a theory of human motivation that examines how social or contextual factors can either enhance or inhibit people's experiences of the satisfaction of three basic psychological needs²⁰. The need for autonomy refers to "volition" and willingness and is concerned with people's aspiration to self-organize their experiences to ensure that activities are consistent with their sense of self. It is satisfied once a person can make choices freely and, subsequently, experience ownership of their behaviour. Competence satisfaction refers to the experience of mastery and effectiveness when engaging in tasks. The need for competence is fulfilled when people can perform tasks confidently and develop new skills to enable mastery in the future. Finally, relatedness satisfaction refers to a person's desire to experience warm, meaningful, and close connections with significant others. The need for relatedness is satisfied when people experience a sense of affiliation with others and develop close relationships.

According to the meta-analysis in which literature on need satisfaction was summarized, most studies investigating basic psychological need satisfaction employed cross-sectional survey designs²¹; yet, some scholars are starting to adopt within-person diary study methods. Psychological constructs ought to be studied as naturally developing or evolving processes. Basic psychological need satisfaction is a psychological construct that depends on the social environment and how it is perceived. Therefore, it can be argued that need satisfaction is likely to fluctuate along with changes in the environment or perception thereof. Basic psychological needs might fluctuate daily and weekly.

When basic needs satisfaction likely varies, it is essential to understand its associations with antecedents and outcomes. Building on the meta-analysis, the researcher aimed to gain a comprehensive understanding of the dynamic processes of need satisfaction by systematically reviewing the available studies. Similar to previous research, (1) key variables (e.g., workload and well-being) were clustered into potential antecedents and outcomes of psychological need satisfaction, and (2) categorized antecedents and outcomes into sub-categories (e.g., work environment and employee factors, employee attitudes and well-being, and behavioural and motivational outcomes, respectively)²¹.

Basic psychological needs are context-responsive constructs. Hence, their satisfaction depends on the organizational context in which employees operate. Several cross-sectional studies investigated workplace factors as “antecedents” of need satisfaction. These factors can be categorized as job demands and resources in the Job Demands Resources (JD-R) model or factors in the organizational context (referred to as organizational resources). Job demands are the organizational, physical, psychological, and social job aspects that require persistent efforts and may result in adverse outcomes. Job demands (e.g., high workload, work-home interference, role conflict, and role ambiguity) are generally detrimental to need satisfaction, but this relationship may not be straightforward. The appraisal of these demands as challenges or hindrances determines whether their effect is detrimental or beneficial. Hindrances are regarded as “health-impairing job demands” that thwart optimal functioning. At the same time, challenges are seen as job demands that are motivating yet require some energy.

In line with this view, meta-analytic findings indicate that whereas hindrance demands (e.g., role conflict) undermine need satisfaction, challenge demands (e.g., cognitive demands) enhance need satisfaction. Job resources are the organizational, physical, psychological, and social job

aspects resulting in goal achievement, growth, development, with the buffering of demands and costs associated with demands. In meta-analysis, a scholar found that the basic needs showed significant positive relations with all the job resources they measured (e.g., autonomy, social support, and skill utilization). Organizations consist of multiple levels, and therefore resources manifest on five different levels: individual, group, leader, organizational, and the broader (outer) context²². Building on the IGLOO framework²², in this study, organizational resources refer to aspects in the organizational context that manifest on the level of the organization (i.e., organizational support or policies) or leader (i.e., leadership behaviour). Studies found that positive leadership (e.g., need-supportive leaders, transformational leadership, and servant leadership) promotes need satisfaction.

Need satisfaction depends not only on the work environment but also on how employees interpret their environment. Firstly, in the realm of SDT, such individual differences refer to general causality orientations (GCOs)²³. Employees can interpret their environment as supportive (autonomous orientation), controlling (controlled orientation), or beyond their control (impersonal orientation). GCOs relate positively to autonomy and relatedness satisfaction. Secondly, personal resources, defined as the personal characteristics (e.g., mindfulness, self-esteem, and self-efficacy) that have an impact on how people can control and influence their environment, relate positively to need satisfaction. Thirdly, biographical characteristics (e.g., age and tenure) also relate positively to need satisfaction. Finally, employee's states (i.e., cognition, affect, and behaviours that change over time due to situational factors) may influence employees' need satisfaction experiences. Implicatively, how some employees feel (i.e., attitudes and wellbeing) in the morning before work or what they strive to do (i.e., proactiveness) during their

workday could relate to their need satisfaction at work. For example, proactive work behaviour is positively related to competence satisfaction²⁴.

Safety and Security Needs: Although physiological needs are relatively satisfied as new needs arise which are classified as safety needs²⁵. These are the needs such as protection from danger, being confident, not feeling fear, financial security, economical security, job security, insurance policies, health and well-being. In addition, safety needs can also evolve according to the social concerns or the conditions of the country employees live in. safety Needs is referred to as the sturdy desire of humans for safety and security to remain secure or safe from any form of harm.

Social Needs: Once the physiological needs and safety needs are fully met, the need for love, commitment and belongingness emerge. At this stage of the theory, Maslow emphasizes that humans are social beings. The individual's needs for belongingness and love represent a wide range of needs, such as feelings of belonging (group membership, clubs, churches, business associations, etc.), spouse, child and maternal love. Individuals want the presence of love in their relations with people, to love, being loved, to be in the hearts of people and groups. This need category, which consists of the need to be accepted by others, to establish friendships, to be with relatives, to exhibit love towards people around and to expect love from them, are derived from the instinct of living together to a great extent. Except for a few pathological exceptions, all people have a need or desire for a stable and sound self-assessment, self-esteem and others' respect. Sound self-esteem means self-respect based on true capacity, success, and respect of others.

Job satisfaction is the degree to which people like their jobs where some people enjoy work and find it to be a central part of life and others hate to work and do so only because they must. In

other terms, Job satisfaction simply means how people feel about their jobs and the different aspects of these jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs. It is generally assessed that job satisfaction is an attitudinal variable. In the past, job satisfaction was approached by some researchers from the perspective of the need fulfillment which validates whether the job meet the employee's physical and psychological needs or not²⁶. However, this approach has been de-emphasized for the reason that the 21st century researchers tend to focus attention on cognitive processes rather than on underlying needs. The attitudinal perspective has become the predominant one in the study of job satisfaction.

Job satisfaction may be termed as a reaction of an individual towards his or her job. Even though varied definitions abound, a commonality among these definitions seems to be that job satisfaction is a job-related emotional reaction²⁷. A job-related emotional reaction can be a sign of an employee's emotional wellness, can be affected by other employee's behavioral influences, and can be an indicator of overall organizational operations; therefore, it is salient to clarify the various levels of job satisfaction and the factors that it comprises. Employers have also attempted to focus on employees' job satisfaction considering that it has a relationship between the survival of an organization and the continual intellectual drain resulting from employees' departure. Set skills and a revolving door of knowledge cum skills which employees bring to their positions within the organization, as well as the knowledge acquired over time, are all lost when employees quit.

Turnover can cost as much as three to five times the annual salary of the involved employees, and crucial for leaders to address this cost on behalf of companies and organizations. Employee's withdrawal leads business leaders to examine ways to cut costs in tighter labour markets for the reason of turnover being a significant profit killer in organizations²⁸. As mentioned earlier, some

job satisfaction factors that may lead to turnover have been identified and a brief review of these positive as well as the negative job satisfaction factors are important for many organizations to understand the problems and costs incurred by employee's departure. However, employee's positive attitude towards their job is very much essential to increase organizational productivity whereas balancing the demands of work and family life are associated with employees' physical and mental health as well as occupational variables such as job satisfaction, performance, absenteeism, and turnover intentions.

Human nature is very complex and required to be well-managed by understanding employee's personal and work environment issues. Many studies reflect work-life balance measure on individual appraisals regarding the level of satisfaction or success with the balance between work and family life²⁹. However, job satisfaction can be increased by implementing work-life balance policies by reducing conflict between work and family. In other terms, job satisfaction creates confidence, loyalty and ultimately improves the quality output from employees. There is a need for the creation of the work environment which facilitates the reaching of employees' full potentials and enjoying their job maximally. Again, there are various theories given for job satisfaction by various experts from time to time but job satisfaction is driven into three categories which are content theorists, process theorist and situational theorist. Content theorist explained the need fulfillment with job satisfaction while the Process theorist defined job satisfaction as mingling of individual, job and organizational variable.

Real satisfaction with a job could only be provided by allowing individuals enough responsibility and discretion to enable mental growth. Originally, job satisfaction was studied as a predictor of behaviours such as performance, absenteeism, and turnover but recently, the interest has shifted towards identifying factors that influence or predict job satisfaction. Personal and work-related

characteristics can influence job satisfaction as recruiting and retaining highly skilled staff is a challenge facing all types and sizes of organizations in the 21st century. It requires taking a strategic approach to the attraction, selection, development and retention of employees, in order to meet staff, business and societal needs³⁰.

Preserving an organization's intellectual capital due to loss of key employees is a global problem, however, there is a lower level of turnover intention when organizational socialization is prominent and an adequate range of opportunities that satisfy career aspirations exist within the organization. Nevertheless, the control of turnover and absenteeism is the observation of employee's behaviour and performance to detect any changes representing job dissatisfaction. Studies indicate that employees' turnover increases when there is a mismatch between management and employees³¹ as employees would not enjoy their job when working with tactless and inflexible managers. Workplace flexibility helps to improve overall employee flexibility and empowerment to have work-life balance which reduces turnover. Researchers found that against all odds, a public sector organization can attract and retain a high quality workforce in a highly competitive market³¹.

Notwithstanding, as far as professional women and their quitting from the jobs are concerned, further quotes that another important reason for professionals, especially women quitting their job is relocation after marriage, or the call to be a mother. A satisfied workforce may be valuable because employees are then less likely to be absent and consequently affect the bottom line whereas a scholar had his view-point that overwork causes stress-related absenteeism, poor retention levels, low creativity, appalling customer service and unethical employees behaviour. Staying competitive and managing career can be difficult in a challenging economy, contrariwise, it was found out that against the odds, a public sector organization can attract and retain a high

quality workforce in a highly competitive market. Nonetheless, researchers revealed that it is difficult to separate home and work life in an increasing competitive environment.

Stress is often developed when an individual is assigned a major responsibility without proper authority and delegation of power, inter-personal factors such as group cohesiveness, functional dependence, communication frequency, relative authority and organizational difference between gender roles and focal persons. Work stress and work-life imbalance are correlated with workaholism, regardless of the gender. Supervisory support and work-family culture are related to job satisfaction and affective commitment since dealing with the work - family - tension results in the career as subject of social fascination and family as a factual task. There are strong connections between dimensions of the work place, stress and job satisfaction. Regardless, there is an absence of theory to provide the conceptual understanding of these relationships as work-family balance is associated with the quality of life when there is substantial time, involvement, or satisfaction to distribute across roles.

As conceptualized, work and family life are separate domains having no bearing on each other however, it is now recognized that domestic identities and responsibilities sometimes spill over into the workplace and that organizational identities and responsibilities often cross into home life³² whereas, personal or family lives, interfere with work are associated for fewer hours but work that interferes with life matters lingers on. Employees' attitudes towards their work hours, perceptions about work-life imbalances actually deals with working time and complaints about time pressure which are unrelated to hours actually worked. Systematically, the prevalence of management control of the work life balance agenda and management's discretion in the operation of work-life issues persists. Having established the correlations of Work-Life balance with several factors on competition and productivity³².

Respect: Even though all the needs at the other levels of the hierarchy are satisfied, the individual would still feel uneasy and dissatisfied, for which reason, people should behave according to their personal abilities: a musician should engage in music, an artist should engage in art, and an author must write to be happy. A person should be whatever he or she can be³³. Self-realization is an effort made by an individual to maximize his own capacity, to develop his skills, and to reach the ideal type of person he really wants to be. Since this is a need for improvement, there is no saturation point, and the needs increase in proportion to their rates of satisfaction. Maslow describes people who realize themselves as individuals with high levels of perception and reality, able to act as they are, solution-oriented, having a tendency to be alone because of being self-sufficient, independent, able to be aware of and appreciate the beauties of life, with deep collective sense, democratic, creative, witty, and resistant against stereotypes.

Maslow's satisfied needs lose their importance as motivational elements, however, it is not possible to separate the needs with exact boundaries³³. It does not require one hundred percent satisfaction to be able to move from a certain need to a higher one. People who are satisfied with some upper-level needs may sometimes feel lower level needs and vice-versa especially in emergencies such as war, disease, natural disasters and suchlike, lower level needs may be at the forefront. According to Maslow, while the proportions are not certain, it is enough to satisfy 85% of the physiological needs, 70% of the safety needs, 50% of the love and belongingness needs, 40% of the appreciation and esteem needs and 10% of the self-actualization needs³³.

Although respect has long had a tacit presence in various areas of organizational research, there is not a widely accepted definition of the construct, which remains a roadblock to understanding

the role that respect plays in organizational life. There are numerous definitions of respect across various disciplines, leaving scholars contemplating whether respect is “an attitude, a mode of conduct, a feeling, a form of attention, a mode of valuing, a virtue, a duty, an entitlement, a tribute, or a principle”³⁴. Furthermore, a difference in the lay usage of the term appears across individuals and even within individuals across situations, such as a mother who desires respect from her child as obedience, respect from her husband as giving space to maintain individuality, and respect from her employer as appreciating her work.

Respect is the “[perceived] worth accorded to one person by one or more others”, as a statement can be adopted here. This general definition serves as the core to conceptualizing respect because it can be applied to generalized and particularized respect, self-respect, and the sender’s or the receiver’s perspective. Be that as it may, the researcher wishes to elaborate on this definition in two important ways. First, scholars in various disciplines distinguish between respect based simply on one’s humanity and respect based on one’s socially-valued attributes, behaviours, and achievements. For example, in philosophy, a scholar distinguishes between “recognition respect” and “appraisal respect.” Thus, various literatures suggest related terms for the same idea that respect falls into two basic categories: generalized respect and particularized respect. Both generalized and particularized respects include the basic definition noted above: “(perceived) worth accorded to one person by one or more others”; the differentiation comes from what the respect is based on. Hence, we define generalized respect as the worth accorded by one or more others, which “is owed to everyone in a social (category) simply as a function of their being persons. It is not conditional on a person’s status or achievements. It cannot be acquired and cannot be lost”. Generalized respect is sent to all members of a social category, where a category refers to a particular way of grouping people (e.g., organization, work group, occupation, gender).

Particularized respect, in contrast, is the worth accorded by one or more others, which is based on the target's attributes, behaviors, and achievements³⁵.

Respect is considered not as something that people simply intuit by themselves, but rather as a judgment that emerges from the treatment they receive from others, making the role of each party important to clarify. Some scholars define respect from the sender's perspective (e.g., "a behavioural manifestation of believing another person has value", some define it from the receiver's perspective (e.g., "an individual's assessment of how they are evaluated by those with whom they share common group membership"), and for others it is not clear whether respect resides in the sender or receiver. Indeed, important and unique research questions are associated with each perspective broached in this study³⁵. Senders include any actor that directly or indirectly interacts with a given social category member in this case, an organizational member as a category member. Senders can be individuals acting on the basis of their own conclusions, or as a representative of the organization or other collective level of analysis. The organization (or another collective) itself can also be a sender of respect, as when, for example, human resource management policies institutionalize practices that convey generalized and/or particularized respect.

Self-Esteem: There are two kinds of esteem needs. The first being the need to be appreciated and respected by others related to the reputation of a person, such as status, recognition, and appreciation while the other one is the need for self-appreciation and self-esteem, such as self-confidence, independence, success, and talent. Self-esteem alludes to a person's general assessment of their personal self with regards to their competencies³⁵. It refers to the self-assessment and engaging framework that an individual makes and keeps up concerning them self. In this sense, self-esteem is an assessment of people's opinion about themselves as people. Self-

esteem mirrors how much the individual "considers him or herself to be as an equipped, need-fulfilling individual": along these lines, people who have high self-esteem have a feeling of sufficiency and a feeling of having accomplished need satisfaction before.

Self-esteem likewise comprises a feeling, (loving/despising) component – high self-esteem individuals are satisfied with who and what they are. The self-esteem build is normally conceptualized as a various-leveled wonder. All things considered, it exists at various degrees of particularity, usually found as far as worldwide, and task or circumstance explicit self-esteem. As a diverse conceptualization of oneself, researchers (by and large) concurred that self-esteem may likewise create around various measurements³⁶. Until now, the greater part of individual's comprehension of self-esteem as a rule and self-esteem inside the work and hierarchical setting originates from research zeroed in on worldwide (constant) self-esteem. Exploration zeroed in on a conceptualization of oneself has, in any case, begun to emerge.

Elaboration of the build gives self-esteem a role as a self-assessment of one's very own ampleness (value) as an authoritative part. It mirrors one's self-esteem that individuals have of themselves as significant, equipped, and skilled inside their utilizing organizations. It mirrors oneself esteem that individuals have of themselves as significant, equipped, and skilled inside their utilizing organizations – employees who have high self-esteem would have to accept that "I tally around here." Researchers have contemplated that people structure a self-idea around work and that their authoritative encounters assume an amazing part in deciding their degree of self-esteem. The writing on the starting points of worldwide self-esteem recommends that self-esteem is influenced by a few forces (powers like those that lead to self-viability). The factors responsible can be classified as (1) understanding signs sent by the natural constructions to which one is uncovered, (2) messages sent from critical others in one's social climate, and (3) the

person's sensations of adequacy and capability got from his/her immediate and individual encounters.

Substantiating further, it was advancedly contemplated that the factors of self-esteem are comparative yet grounded in one's work and hierarchical encounters. While discussing the job of workplace structures, it was observed that in unthinkingly planned social frameworks, individuals will in general, foster low degrees of self-esteem. Such friendly framework advances the improvement of conviction frameworks that are consonant with the intrinsic doubt in the capacities and eagerness of individuals to self-manage³⁷. Expanding upon the idea that esteem is a various leveled and complex wonder, and perception that esteem demonstrates the degree to which someone trusts him/herself to be skilled, critical, and commendable.

Organization-based self-esteem is characterized as how much an individual trust him/herself to be proficient, huge, and commendable as an authoritative part³⁸. Consistent with perspective on esteem, individuals with solid organization-based esteem have a feeling of having fulfilled their necessities through their hierarchical jobs. Organization-based self-esteem is less pliant than task-explicit esteem, but more malleable than worldwide. From the get-go in one's residency with an organization, organization-based self-esteem is an external level conceptualization of oneself – state-like, reflecting temperamental sensations of self-respect. With expanding residency, esteem advances from an essentially external level to a less inconsistent internal level self-idea. In this manner, for most occupation experienced workers, organization-based self-esteem is profoundly steady. People who are authoritative and with high organization-based self-esteem have come to accept that "I have an effect around here" and that "I am a significant piece of this spot"³⁸.

Self-esteem as a concept has been put up as a strong force that can affect work performance. It is important because it shows how individuals view themselves and the sense of personal value. High self-esteem predicted better work conditions and outcomes, while workers with low self-esteem are overly-dependent and have difficulty in making decisions. Self-esteem as an overall evaluation of one's personal worth or value is a collection of an individual's attitudes toward him or herself. Self-esteem is an individual's disposition which represents his judgment of his own worthiness. The development of self-esteem depends on an individual's evaluation of other people's competencies in comparison with his or her own. Self-esteem is the experience of being competent to cope with the basic challenges of life. Self-esteem is also the total sum of self-confidence (a feeling of personal capacity), and self-respect (a feeling of personal worth). Without the fulfillment of self-esteem need, individuals will be driven to seek it and unable to grow and obtain self-actualization. Self-esteem can impact one's performance to a large extent.

Emotional interactions, the ability to prove oneself, efficient competency skills and anger management also contribute to the development of self-esteem. When an individual accepts himself or herself, such individual can live in harmony with the strong and weak features of his or her personality³⁹. Employees' self-esteem is negatively influenced by his or her failure to meet goals. Matching individual standards, wishes and performance capacity positively influences employees' self-esteem. What this means is that if the employees' work standard corresponds with their attitudes, employees are more likely to develop self-esteem. Significantly, it should be noted that the self-esteem of some persons can be influenced by many individuals from the past, ranging from teachers, colleagues and classmates to other social groups with whom individuals have had contact in the past or still have contact³⁹.

2.1.2 Concept of Office Ergonomics

Ergonomics, also known as human engineering, comes from the Greek words “ergon”, which means work, and “nomos”, which means health. It is the study of how people work and how to design the workplace so that people can easily adapt to it and become more productive as well as safe. Ergonomics is the study of how a worker interacts with his or her working environment and it includes the physical space in which a person works, as well as the tools and materials, work practices, and work structure, whether the person works alone or as part of a team. Modern ergonomics can be traced back to the world war from 1939 to 1945. In the United Kingdom, experts from different fields were interested in how well people did their jobs and how important theory and method were. This was the start of the field of ergonomics⁴⁰. From the 1960s to the 1990s, many changes were made to ergonomics which include cognitive ergonomics, organizational ergonomics, positive ergonomics, and spiritual ergonomics⁴⁰. Ergonomics has become a bigger issue for the organization, since the rise of safety and health at work. Every company in the world has put more thought into making their workplaces safe.

The International Ergonomics Association (IEA) opined that, Ergonomics or human factors is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system. Office Ergonomics has been identified and defined as the branch of ergonomics dealing specifically with the office environment⁴¹. Many companies have contested the established view of office design and office work since the beginning of the 1990's. Most of the offices nowadays are based on the concept of non-territorial or free address offices in which a given desk, office or workstation is intended to be used by different people at different times. It is important that the management of organizations has a clear understanding that when transforming the office to support flexible work practices, the primary focus must be on people's

needs and behavior rather than on actual interior design. Based on experience from research performed in the United States and Sweden, some critical factors for success of the office design process have been identified. These include: A clear identification of the project owner, projects that are productivity-driven and not cost-driven, identification and realization of benefits for the office staff, staff involvement in the process, all aspects of the project considered as a whole including the available space, interior design, information technology, organization, and working practices, good interior design and openness and flexibility to meet future requirements⁴¹.

To succeed with an office design concept based on flexibility cum openness requires a new and different way of looking at offices. The office must be regarded more as a tool, like any computer or telephone system, with the main purpose of supporting the business tasks. The organization of computer-based tasks has proven to have an essential impact on the comfort of the user. The environmental factors in the office environment also play an important role in ensuring comfort and efficiency in task performance. Reflections in video display terminal screens, high indoor temperature, and disturbing noise levels are factors that could occur in cases of bad office planning in which the negative impact of those factors must not be overlooked. Even though the computer hardware is designed according to the latest ergonomic findings, extensive keyboard input work could still cause muscular problem such as repetitive strain injury. Flexibility in work practices and work positions is essential to minimize health and safety risks. This paper presents a review of the effects of business process analysis approach to office design ergonomic aspects of the organization of office work, office environmental ergonomics, and workstation design tools⁴¹.

Extended work with computers can lead to muscular fatigue and discomfort, usually in the back, arms, shoulders and neck. As well, if the computer is used for prolonged periods in awkward

postures, there is a risk of musculoskeletal injury (MSI). This risk increases as the intensity of computer work increases. Frequently, the source of muscular fatigue and discomfort is the operator's posture while working at the terminal (this posture is due in turn to the layout of the computer workstation and the furniture provided). The specific tasks and the intensity of the work are also factors that contribute to severe risks of MSIs. Computer operators may experience visual as well as muscular fatigue, discomforts and other symptoms which include eyestrain, burning eyes, blurred vision and headaches. The layout of the computer workstation can increase the visual demands on operators, as can lighting levels and glare⁴¹. Office ergonomics is the science of making the workstation essentially fit, comfortable, safe, secure and efficient for the workers so that they enjoy giving more productive outputs to the organization they belong to. In general, the purpose of ergonomics is to fit the task to the individual and not the individual to the task. Chronic addiction to gadgets, handheld devices nowadays increase chances of many musculoskeletal disorders which cannot be neglected. Many researchers' claims that prolonged working on these gadgets results in faulty postures with a high risk of developing injuries.

Office ergonomics in the workplace adds value to the business and makes employees more interested in their jobs. Organizations, on the other hand think that a healthy workplace can help foster a culture of innovation and creativity⁴². The situation with employers necessitated government into passing laws to ensure that people have safe and healthy jobs⁴². Office ergonomics should be used to improve quality, productivity, and safety by making products, tasks, and environments fit people instead of the other way around. Ergonomists look at the worker, the workplace, and the design of the job to figure out how well a person fits their job. Office ergonomics is based on the idea that the demands of a job should not go beyond what a worker can do and what their limits are, this is to prevent stress at work, which can be dangerous

to employee's safety, health, and productivity. The goal of an ergonomics program is to make the workplace safe and productive so that the organization can reach its goals. "People-oriented" and "ergonomic design" are terms that are being used by more and more companies to describe their products. One of the office ergonomics trends in the business world is the idea of "green design". As the global environment becomes more dynamic, organizations and businesses are forced to keep looking for the best ways to plan and manage innovation through new methods and paradigms that efficiently serve both new and existing markets with new and/or changed products and services⁴³. Organizations' operations create a link between macro-level and micro-level data, where different communities and stakeholders are involved, and between ergonomic thinking and radical innovation, creating value, and their processes. Office ergonomics' uses have changed over time as ergonomical research and knowledge has grown and as new human concerns has come up around the world.

Human health and safety are the main goals of ergonomical research and advice. This includes the prevention of musculoskeletal diseases and other health and safety concerns in the workplace. Also, workplace health and safety laws in many countries have a strong connection to ergonomics⁴⁴. In these situations, companies may not see ergonomics as an important part of their strategy, corporate goals, planning, and control cycles, but rather as an outside factor. In terms of health and safety, the current trend in western government policies, which is to reduce command-control legislation while increasing support for voluntary initiatives, is a threat to ergonomics because organizations will not start ergonomic initiatives on their own. In an office, the idea of occupational or workplace injury has been around for decades. Occupational safety practices are used in organizations in developed countries but most organizations in developing countries have not done anything yet with occupational safety, cognitive ergonomics, or

organizational ergonomics⁴³. Most of the health care fields in the United Kingdom are using ergonomical interventions to create training programs for robotic surgeons which result in the reason more than 81% of the surgeons recorded improved job performance⁴³.

Some of the benefits of office ergonomics include optimizing the integration of man and machine in order to increase productivity with accuracy. Taking care of the factors governing the physical and mental strain (fatigue) so as to get maximum satisfaction for the worker and at the same time enhance the productivity. Office ergonomics also attempts to minimize the risk of injuries, illnesses, accidents and errors without compromising productivity as well as improving the design of machine at the initial design stage or later whenever the existing product or process is modified. Thus office ergonomics helps in developing most comfortable conditions related to climate, lighting, ventilation and noise level. It also helps in reducing the physical work-load, improving working postures and reducing efforts of certain movements, making the handling of machine levers and controls easy and also helps in achieving increased safety.

As a result of the health risks posed by poor posture and repetitive stress, proper ergonomics are too important to ignore. A careful analysis was done on how the lack of ergonomic principles in the office can negatively affect some of the key human body parts i.e. the eyes, neck, wrist, arms, back, hips, legs, knees and feet⁴⁵.

Eyes and neck: Incorrect monitor positioning can cause neck and eye strain and can lead to poor seat positioning, which creates pressure on the back. The top of the monitor should be positioned just above the eye level when one is seated. This is the best place for “vision cone”, the most immediate field of vision, which starts at the top at the eye level and descends at a 30-degree angle⁴⁷. When monitors are too far away, people tend to lean forward to see well. This is

increasingly true as people age, since vision almost inevitably declines over time. A rule of the thumb is: if one can extend the arm and just touch the screen with the fingertips, then, the monitor is in the right position.

Wrists and arms: To keep wrists and arms at an optimum position, reducing the risk of repetitive-motion injuries, the keyboard and mouse should be at the same level as the elbows when seated. Since most desks are too high for this position, a simple fix is an adjustable keyboard tray that attaches to the underside of the desk.

Back and hips: Sitting properly takes 20 per cent to 30 per cent of the pressure off the lower back. The chair should be between 17 inches and 19 inches deep, and it should have good lower-back support. The body should be positioned with the back against the chair and hips open. If one still lean forward to see the monitor or reach the keyboard, they should be moved towards the body.

Legs and knees: Leg positioning contributes to the overall position in the chair, one has to be sure the legs are at about 90-degree angles at the knees. This helps alleviate pressure on the back. Movement is essential for circulation, however, subtle shifts should be allowed in positioning and ensuring standing, stretching and walking a few steps at least once an hour. People who have been diagnosed of circulation problems should move about more frequently.

Feet: Feet should be firmly planted on the floor. If the chair positioning and proper wrist alignment results in the feet not reaching the floor, a block, few books or some other type of footrest should be used to support the feet. However, it must be ensured that the height of the support is keeping the knees at a right angle.

Various office ergonomic principles which should be considered during the design of numerous work systems include:

Design of workspace and work equipment in relation to body dimensions: The working height should be adapted to the body dimensions of the operator and to the kind of work performed. Seat and working desk should be designed as a unit to achieve the preferred body posture. Sufficient space should be provided for body movements. Controls should be within functional reach. Grips and handles should suit the structure of the hand.

Design in relation to the body posture: The design of work should be such that it avoids unnecessary or excessive strain in muscles, joints and respiratory and circulatory systems. The operator should be able to alternate between sitting and standing positions. To exert high muscle, the chain of force through the body should be kept short and simple by allowing suitable body posture and providing appropriate body support. Body postures should not cause work fatigue from prolonged static muscular tension.

Design in relation to the muscular strength: Strength requirements should be within physiological desirable limits. Maintenance of prolonged static tension in the same muscle should be avoided.

Design in relation to body movements: Body movements should be in harmony with each other. A good balance should be established among body movement. Motion should be preferred to prolonged immobility. Movements with great accuracy requirements should not entail exertion of considerable muscular strength. Execution and sequencing of movements should be facilitated by guiding devices.

Design of signals, displays and controls: Signals and displays should be selected, designed and laid out in a manner compatible with the characteristics of human perception. Controls should be selected, designed and laid out in such a way as to be compatible with the movement of that part of the body by which they are operated. Control movement, equipment response and display

information should be mutually compatible. Where controls are numerous they should be laid out so as to ensure safe, unambiguous and quick operation. Critical control should be safeguarded against inadvertent operations.

Design of the work environment: The work environment should be designed and maintained so that physical, chemical, biological conditions have no adverse effect on people but serve to ensure their health, as well as their capacity and readiness to work. Work environment should include adequate work space, air renewable, emission of pollutants, appliances consuming oxygen, thermal conditions, air temperature, air humidity, air velocity, thermal radiation, intensity of physical work involved, distribution of working hours, illumination, absence of glare and undesirable reflections, noise, vibrations, exposure to dangerous materials etc.

Design of the work process: The design of the work process should safeguard the secretary's health and safety, promote well-being and facilitate task performance, in particular, by avoiding over-loading and under-loading. Over-loading produces fatigue while under-loading results in monotony which diminishes vigilance. The physical and psychological stresses exerted depend not only on factors considered above but also on the content and repetitiveness of operations and on the workers control over the work process⁴⁸. While designing the work process, particular attention should be paid to the variations in vigilance and work capacity over day and night. Also differences in work capacity among operators and changes with the age should be among the factors for consideration. Conclusively, individual bodily development should be paid attention to.

In the past few years, there has been more research into how to make workplaces more ergonomical in order for workers to be less likely having musculoskeletal diseases. Even so, the

use of ergonomic interventions in the workplace is still in its early stages. A study carried out in Denmark showed that both workers and people who work in offices know very little about how occupational health and safety (OHS) practices at work can help prevent and treat musculoskeletal diseases (MSDs)[&]. OHS professionals have requested for guidelines on how to prevent and treat MSDs that are caused by work, and have prescribed that the guidelines should focus on a number of OHS issues and the ergonomics of the human body to reduce injuries in the workplace. Organizations are making progress on creating guidelines on office ergonomics and safety practices for the prevention and treatment of MSDs in the workplace.

Office ergonomics interventions include making changes to the equipment already available, changing the way work is done, buying new tools or other devices to help with the work, and making other changes that are common in the organization or institution. Organizations are putting more efforts into giving workers some trainings that help them learn more about working methods and techniques, as well as how to move, sit and stand. Participatory ergonomics is becoming more common in organizations since it is a good way to implement a program to prevent work-related musculoskeletal diseases (WMSDs) as these are a major public health issue that cost businesses, employees, and health-care systems a lot of money. Brazil has one of the highest rates of diseases and accidents that happen at work in Latin America. These diseases and accidents have a big effect on the society at large and cause less work to get done. The Brazilian government discovered that WMSDs are the commonest reason people get sick and stay away from work. Participatory ergonomic intervention strategy, which is mostly used in Brazilian organizations, shows how it was used to find ergonomic flaws, come up with a solution that everyone thought was possible, and put this solution in place in a Brazilian company, which reduced workers' exposure to musculoskeletal risk factors⁴⁴.

Research has shown the following as the measures of office ergonomics: office environment, workplace comfort and office safety/security

Office Environment

A productive office environment consists of a number of elements identified as: office accommodation/space, office layout, furniture, office equipment, noise conditioning, colour conditioning, flexibility, comfort, communication, lighting, temperature and air quality as the constituents of an office design and productivity. Office environment implies the general physical conditions in an office under which office activities are carried out⁴⁹. It also refers to the comfortable, pleasant, safe and non-frightening atmosphere or setting of an office where employees can perform their duties. Office environment affects the efficiency of the office personnel a great deal since secretaries working in an office cannot work efficiently unless provided with the right type of working environment. The main purpose of an office environment is to support its employees in performing their job at minimum cost and to maximum satisfaction. The office secretaries spend a large part of the day in the office doing office work hence the reason for the office environment to be made conducive and safe. The elements of the physical environment of the office have deep psychological effects which tend to stimulate the overall productivity, efficiency and satisfaction of office secretaries. It is clear that the provision of proper and adequate office accommodation space is of primary importance in office management. Unfortunately, very few offices recognize this importance and the type of office accommodation provided in most offices is generally poor and inadequate which at the end, results in poor performance and waste. The physiological and psychological response to the physical environment varies on an individual basis, depending on age, sex, somatic type and

ethnic background⁵⁰. In principle, the mentioned elements of the office environment should be controlled within a range that accommodates the tolerance level of 90 to 95 per cent of the office population⁵¹. Providing 100 per cent satisfaction where large numbers of people are considered can or may never be attained. Discussed below are such elements of office environment;

Office Layout: This is the arrangement of equipment and all other physical components within an available floor space of an office⁵². It is also the arrangement of work-station in the space involved so that all equipment, supplies, procedures and personnel can function at a maximum efficiency. Office layout is a combination of two things, the first being the determination of space requirements and the second is utilization of this space⁵⁴. The arrangement of all physical factors in an office must be practical so as to facilitate office work at minimum costs. It is noteworthy, that the productivity of an organization can be significantly affected - both positively and negatively - by the layout of its various work areas. From a cost-effectiveness standpoint, designing efficient work areas is critically important since it is the office layout that determines if space is used in an efficient and cost-effective manner (or otherwise) as well as how much satisfaction employees derive from their jobs. Office layout also has an impact on the impression people get of the work areas.

Layout design requires consideration of the inter-relationships between equipment, the flow of work and employees. These inter-relationships must be thoroughly studied and analyzed in the process of planning efficient work areas for employees. The office is usually divided into departments and sections to secure the benefits of functional specialization. It is the primary aim of office layout to plan the departments that are to be located very close to another and the arrangement of the space or the area allotted to each department must be done in a way that the activities of the different departments are easily co-ordinated. Furthermore, extensive

preliminary planning is essential when preparing the office layout. Planning is the most important stage that affects all other stages and will ultimately determine whether the final results are effective and efficient.

Unplanned and faulty placement of furniture, equipment and men often result in loss of efficiency and needless waste of time and energy. A costly machine or equipment is of little value unless it is placed where it can be put to the best use. A major task before the office manager is therefore; to plan the layout of the office scientifically so that the available space is utilized in the best possible manner in order to ensure that efficiency in the functioning of furniture, equipment and personnel may not be hampered.

Significantly, inadequate planning is likely to result in reduced secretaries' productivity, increased absenteeism, increased turnover, decreased physical comfort, decreased employee morale, office furniture that fails to meet the needs of its users, work flow pattern that are cumbersome and awkward, traffic patterns that are inefficient and many others. All these affect the job satisfaction of the office manager. However, efficient layout results majorly both in operational and economic benefits such as; the creation of a pleasant working environment for employees, facilitating efficient work flow, providing employees with efficient, productive work areas and lastly, having positive impact on the organization's clients. Moreover, the office layout should take into consideration each departmental or sectional arrangement, space requirements for workstations, the reception area, specialized areas, boards or conference room, central records area, room for possible expansion, safety measures, environmental conditions etc. Also, the arrangement of furniture such as:

Interior Decoration: The interior design of the working space is directly related to the productivity and success of the business. Interior decoration includes pleasant colouring of walls, doors and windows; blinds, placing or hanging of attractive calendars, pictures, paintings, fun desk accessories, artworks, charts, wall papers, plants, motivational quotes on the walls or around the office and choosing the right type of floor coverings, as well as the use of suitable furnishings. Invariably, it is a way of decorating and making the interior of an office feel inviting to work in, to comfortably sit back and carry out the job. Employees may feel unfocused sometimes at work, an improper workspace can be distracting but interior decor has an influence and control on productivity as the right atmosphere can stir the senses, motivate, help stay efficient and focused. Interior decorations blend professionalism with the personal favorites, and create surroundings that encourage focus (rather than feeling distracted).

The improvements in the office ambiance have a substantial effect on the positive changes for the employees: motivation, creativity, success, and happiness can be enhanced by the right space arrangement, light and airflow, the presence of natural and organic details. In contemporary office design, on the worldwide scene, the new technologies and innovations entwined with human design and nature inspired elements can offer amazing opportunities for change and growth. Researches claimed it is helpful to be around items that make one feel relaxed and when the pieces around one are fascinating, moods and productivity are improved. Bookshelves add a professional feeling to any room. The contemporary working spaces should provide so much more than just a desk and computer for the reason of being an instrument creating and adding functional meaning to the office aesthetically. Work with contrasting colors, or opt for a uniform vibe by styling the space in bright whites as classic colour scheme is always trendy. The interior of an office workplace should be carefully designed to have strong connection with nature,

organic details and natural lighting, spaces that promote physical activity and social interactions, at the same time, keeping an eye on creating safe, comfortable and inspiring working ambiance. Constructive modern architecture and planning of space can provide a healthy and safe working environment for happy and productive employees.

Lighting in the Office: Lighting plays an important role in office design and the reason lighting is important is people. The secretaries cannot be blindfolded to get works done and yet the lighting in so many offices has the effect of partial blindfolds on the office workers. At the same time, inadequate lighting increases employees' fatigue as a result of excessive eye strain which inevitably leads to irritation. The greatest danger of badly-lighted offices comes from glare.⁵⁵ Office work is mostly paper-work and computer-based involving a certain amount of eye strain and mental concentration, therefore, office efficiency and job satisfaction are still closely tied to lighting. In modern day office operations, the eyes are used at close range for several vital tasks.

Aesthetically, lighting should not be an after-thought but an integral part of thinking and planning in the office space design. Despite modern machines that tend to assist the brain and other parts of the body, nothing has yet been developed to replace the eyes. This is the reason for effective lighting to be taken into consideration⁵⁶. The quantity of light in an office is measured in foot-candles and sufficient lighting however, should always be related to the task being performed. Tasks involving a high degree of details or study and eye strain (e.g. accounting and book-keeping work, operation of office machines etc.) will require light intensity of about 50 foot-candles. Other types of office work such as, correspondence, filing and others require light equivalent to about 30 foot-candles; whereas lighting required for normal and capital seeing tasks is about 5 to 10 foot-candles. Also, individual differences among employees should not be overlooked when considering a lighting system as some may need or prefer more illumination in

their work areas. A more recent approach to office lighting is the use of task lighting. Rather than having all areas of an office with identical illumination, only the task areas requiring high-light-quantity are so illuminated.

As far as possible, natural lighting should be utilized for the offices. This is both economical and good for the health of the eyes. In this context, it is well to remember that the aspect of the building determines to a great extent, the amount and quantity of natural light coming in. For instance, a building facing South or East receives greater amount of brighter light during the best part of the day, whereas buildings facing otherwise usually get less sunlight. Even more, it should be remembered that provision of artificial lighting means increase in the cost of office space.

Colour Conditioning: Colour is another of the elements of the office environment that impacts significantly on humans. While most employees and employers are aware of the physical impact of colour, many are not aware of its positive psychological impact as it affects productivity, fatigue, morale attitudes and tension⁵⁸. Moreover, colour is an important variable in an office design, partially because of its relationship to other environmental factors, such as lighting, furniture and layout. Therefore, in an office, colour is important because it creates not only aesthetic value, but also a functional effect on workers, customers and visitors in an office. The functional selection of colour is concerned only with how much light it reflects. Office colours must be carefully chosen for walls, floor coverings, curtains and furniture. Walls, ceilings and other reflective surfaces should primarily use light; soft colours e.g. light yellow or green. Floors, carpets or rugs may be darker (since they have no reflective value). To create a particular mood, certain colours can be selected.

A noticeable trend in offices today is toward more colour diversity, yet still retaining a coordinated colour scheme. Colour should be carefully selected for an office as in decorating a new home and to achieve a warm interior décor. Fortunately, office design and furniture manufacturers have a wide choice of colour schemes in their furnishings which will add life and interest to the office and its physical environment. Colours are also known to have particular meanings which enable human beings to use them to produce definite effects. Colour tends to create moods; cool colours such as blue, green and violet create calm and retiring mood while warm colours e.g. red, orange and yellow on the contrast create warm and cheerful moods. The natural tints, including beige, buff, peach and off-white are mildly stimulating while deep purple and pale violet often creates depressing moods. Gray tends to create a sleep-inducing effect.

Noise Conditioning: Noise control is the process of keeping noise and sound in the ranges which are comfortable for human office activities in order to provide for good hearing and speech privacy which is not synonymous with total elimination of all noise and sound. Noiselessness and soundlessness are most undesirable for when noise reaches an undesirable level, various physical and psychological conditions may occur⁵⁹. It is however, the concern of the researcher to deal with procedures to reduce or eliminate excessive noise. Too much sound or noise disrupts concentration with linear effects – a state of senselessness. Continuous high noise levels can result in either temporary or permanent hearing loss. High noise levels produces fatigue and hamper productivity as well as cause nervous conditions, tension and irritability (job dissatisfaction). In addition, high noise level can increase one's blood pressure and metabolic rate, both of which create serious health issues[&].

In modern days, noise or sound problems within the office have been intensified by the advent of new lightweight construction materials and techniques for buildings which may be coupled with

an increasing density of people within the office space. Controlling the noise in an office can be attained by different means; isolating noisy equipment or initially selecting office machines that are free of noise, soundproofing the work area by using specially constructed materials for walls, ceilings or floor areas for the noise not to travel excessively, blending office noise with low-level, non-disturbing background sounds to evenly distribute the sound or noise in the office which is also known as masking out extraneous or unwanted noise, using sound-absorbing covers and devices which can be placed on or under certain kinds of office and noise-generating machines is also another way of sound proofing an office. The best way to eliminate noise is not to create it at all and this can only be accomplished by having an appropriate layout.

Noise is measured in decibels and any noise can be termed “excessive” if it exceeds a specified decibel level or if it exceeds a specified level or if it causes distractions which interfere with employees work capabilities. The faintest sound that the human ear can detect is “zero decibel” which implies that other sounds with greater intensity have decibel values higher than zero value. The most desirable range of noise is from 40 to 50 decibels. Higher noise levels associated with office equipment or machines may result in distraction and great fatigue. The goal of any noise control system is to produce speech privacy. Confidential privacy is achieved when no more than 5 per cent of the words are understood in an adjacent area. Normal privacy is achieved when no more than 20 per cent of the words in a conversation can be understood in an adjacent area.

Recent approach towards noise conditioning includes the integration of components into a system to produce the desired results, the use of domes of silence and so on. These domes, at the push of a button will enclose or acoustically isolate a specific area, voices will not penetrate through the dome and therefore cannot be heard outside the domes.

Conditioning the Air: The air in which employees work can also impact on their physical and psychological well-being. In fact, with employees spending 90 per cent of their working hours indoor, the air quality is a major concern. In many of today's office buildings, the air contains more chemical irritants and biological matter than the outside air contains. Factors affecting air-quality include temperature, humidity, ventilation and air cleanliness. Excessive levels of moisture, inadequate mechanical ventilation and tobacco or cigarette smoke are the major contributors to the indoor air pollution found in many of today's office building. The air in working areas, especially those in which equipment produces heat build-up, must be properly circulated if its quality is to be maintained. Without air circulation, the temperature of the air that surrounds an individual tends to increase, which results in a certain amount of discomfort; the more reason smoking is disallowed in the office area.

When the ideal humidity level is within the proper range, the ideal working temperature in an office is 68 degrees Fahrenheit[&]. Presently, solar energy is undoubtedly a primary heating source in offices. This solar energy is able to provide all the heat needed (depending on the geographical location of the building). However, one sure way of determining whether or not installing an air-coding system is cost-worthy or not is to try and determine its impact on increased worker's efficiency. Furthermore, devices that are devised to cleanse, entrap unclean, stagnate and stale air within the confines of office work areas are now being installed in many offices and these devices cleanse the air of germs, dust and dirt. Air cleanliness is becoming a greater concern as buildings become more airtight and energy efficient. Also, Ultra-Violet lights are useful for killing germ-laden and bacteria-filled air, mechanical filters are used to remove dust and other foreign particles around offices.

In addition, a dust-free atmosphere is essential in the data processing center because of the sensitivity of the computer. The benefits of installing systems designed to condition the air properly in an office exceed the cost, in most cases, as the comfort of the employees is improved; greater levels of productivity and efficiency are recorded. Absenteeism and tardiness are reduced as employee's health is improved.

Music in the Office: Music can serve as an environmental aid because it has the ability to soothe emotions and give a physical and psychological lift to employees. Music also has the general effect of relieving mental and physical stress and reducing nervous tension and strain⁶⁰. The use of music has increased over the years and has also been expanded for use on telephone systems in some offices. Basically, office music is designed to reduce fatigue cause by strain, job monotony or general tiredness from long periods of work. This is expected to result in increased productivity and job satisfaction of secretaries.

Several alternatives are possible for developing a music system for use in the modern offices (unlike office settings in the past). Some new offices obtained their own source of music from internet sources, service vendors (specialized firms) and so on. A small office may rely on a conventional radio station while some other organizations provide their own music source, such as tapes, phones and CDs. The conventional public address systems satisfactorily accommodate each of the alternatives just discussed.

The success of a music system is significantly affected by the nature of the music programming and its use. Music should be related to the desires of employees and should reflect the mood and temperament at any given time. Music should be programmed to match the body cues of an individual; it may be cheerful and bright in early morning to encourage swift movements and

become more subdued by mid-morning to a tune generally associated as a peak in the secretary's performance cycle. Later in the day, similar changes in programming are made to ward off fatigue and boredom as fatigue is generally most noticeable midway through the morning and afternoon work periods and just before lunch hour and closing time.

Research has shown that continuous played music loses its full impact because employees are no longer conscious of its presence; therefore, short breaks in the music program create awareness. An on-for-fifteen minutes, off-for-fifteen minutes cycle provides the necessary breaks³¹. Some firms specializing in the installation of music systems have given glowing reports on successes achieved by firms using music. Such beneficial results include increased job satisfaction and reduced absenteeism plus lesser errors.

Cleanliness and Sanitation: Clean workplaces are often not given paramount attention in most organizations, regardless, it is a vital part of health and safety. Poor hygiene practices can result in secretaries having to take time off sick and could potentially lead to the development of numerous health issues which conversely affect their personal and professional lives. Unsanitary conditions may affect the health of employees adversely and they may find it difficult to discharge their duties properly. It is, therefore, necessary that office rooms are kept neat and clean, free from bad odour and infection. To this end, disinfectants should be used. Walls, partitions, ceilings, doors and windows should be whitewashed, painted or varnished at least once in two years.

Workplace Comfort

Workplace comfort is a state of physical or mental ease, the absence of discomfort, pain or stress where a worker feels relaxed and contented⁶¹. Workplace comfort can also be a state of mind,

where a worker feels emotionally secure, at peace, have a feeling of acceptance and belongingness within the work environment⁶². Workplace comfort is often associated with physical sensations such as warmth, softness, and coziness. It is a feeling of security and familiarity, where a worker feels safe and at home even though he/she is at work. Comfort can come from relationships, community, and a sense of purpose. It is a state of being where one feels satisfied and fulfilled. Comfort can be subjective and varies from person to person as what is comfortable for one person may not be comfortable for another. Workplace comfort can also be influenced by culture, environment, and personal experiences.

Secretaries spend most of their day at work and it is very important for workplaces to be comfortable as well as the office furniture to be ergonomically designed in terms of ease and for employees' efficiency, health and productivity. When workers are mentally and physically comfortable, they are much more likely to be productive in the short term and they also are more likely to stay on the job. Ergonomical office furniture is one of the best ways to create a comfortable and safe work environment that prevents work-related injuries since musculoskeletal disorders resulting from poor posture are a particular concern for office workers especially secretaries. Comfortable offices where employees have the realization of their expectations, feel at ease as they would at home, and spend long hours should be designed ergonomically. It is vital that employees performing repetitive movements do not have to continually assume awkward positions or over-exert themselves. Temperatures should not be in the extreme. Proper support, which may include armrest, footrest, headrest and suchlike are needed for secretaries to ensure workplace comfort.

There is a debate in the literatures about the concept of workplace comfort⁶³. However, majority of the authors agree that comfort is of a subjective nature⁶⁴. The comfort or discomfort in a working environment can therefore only be evaluated by the user. An artifact in itself can never be comfortable hence the reason much attention should be paid to how a user should be involved in the design process. The end-user (secretary) should be involved, because he/she has unique insight into the task, work or activity. This involvement of stakeholders like the end-users is addressed in 'participatory ergonomics'⁶⁵. Nowadays, designers and engineers know that a comfortable and ergonomical work-place can sensibly improve the global performance of a user and can also reduce the risk of musculoskeletal diseases and the consequent absence periods and/or insurance issues. In the last ten years, ergonomic evaluations seem to be not sufficient for assuring a good level of well-being and whole safety of workers and users, so that researchers concentrates their efforts on the study of comfort evaluation. When all ergonomic parameters are measured and when they can be considered in a safe range, the study of comfort perception can commence while using a product or while working in a workplace.

Reviewed literatures revealed more than 100,000 scientific papers dealing with comfort and discomfort; most of which speak about relationships between environmental factors (such as temperature, humidity, applied forces and so on) that can affect the perceived comfort/discomfort⁶⁶ of workers.

Visual Comfort: Discomfort glare from day-lighting and electric-lighting has become a common problem in many office environments as imperfect lighting and glare can cause eye fatigue. Glare is difficulty of seeing in the presence of bright light such as reflected sunlight or artificial light⁶⁷. Glare is also the condition of vision of persons within the illuminated area of a lighting

installation in which there is discomfort and/or a reduction in the ability to see details or objects caused by an unsuitable distribution of luminance and/or an unsuitable range of luminance values⁶⁸. Glare is a shine that is much too bright and feels as if it is hurting the eyes⁶⁹. Glare is caused by a significant ratio of luminance between the task and the glare source. Glare can occur in the form of reduction in the visual performance (disability glare) as well as in the form of discomfort glare.

Frequent conscious blinking and refocusing by looking into the distance prevents eye dryness and fatigue. To decrease glare, the monitor screen should be positioned at right angles to windows and glare sources. Tilting the bottom of the monitor down may eliminate glare from overhead or reflected lighting⁷⁰. Newer computer monitors may have built-in glare screens. Glare screens are not recommended for older monitor models because they can distort the text. Where glare screens are the only alternative, only those with American Optometric Association (AOA) approval should be considered. Blinds or other window coverings can modify window glare. Overhead lighting can be altered in various ways depending on the type of lighting. Those with cantilever coverings usually can be adjusted to redirect the light intensity. In some situations, a fluorescent tube can be unscrewed to eliminate the glare source. Coverings designed to envelope standard fluorescent tubes and flat sheets inserted into the fixtures to soften the lighting (spectrum filters) are readily available from office suppliers. Task lighting may be needed when overhead or peripheral lighting is decreased. This may be a desk top lamp or wall mounted light over the work area.

Though most offices are illuminated with harsh fluorescent lighting, this is unsuitable for secretaries and computer users as it creates a lot of overhead glare and harsh shadows. Ideally, a monitor should be in a softly lit, dim area. Where this is not possible, the monitor should be

positioned between rows of overhead lights instead of directly underneath them, and a light diffuser should be used. It might be necessary to buy a hood or a glare guard for the monitor where the sources of glare cannot be eliminated. Glare guards, however, should be considered a last resort because many of them reduce glare at the cost of screen clarity.

Seating Comfort: A model of seated comfort in which comfort and discomfort are conceptually separated has been proposed by some scholars⁷¹. It was argued that ergonomic chairs tend to be over-designed with insufficient attention paid to aesthetics. This argument is critiqued on both methodological and conceptual grounds. Office secretaries need to be able to perform their official tasks without awkward movements that put stress on the wrists, elbows, necks, shoulders, backs, spines, and even the knees, hence the reason tools and equipment should be placed within easy reach. It is extremely important that products like office furniture are designed with ergonomic considerations. The chair should be comfortable for the secretary, supporting the back and allowing the feet to touch the floor. While seating on an ergonomically-designed chair and working with a computer, the height of the chair must be adjusted accordingly. The positioning of sitting uprightly will not produce any neck, shoulder or eye stress. This could be addressed with the principles of working heights in ergonomics and aptly placing it to ease the process.

Different types of office furniture can promote workplace comfort. Examples are chairs; sitting while working requires using a chair (although an ergonomic stool is a good option). The ergonomics of a chair significantly impact the ability of a worker to perform the job efficiently⁷². Even the well-designed chair is useless if it cannot be adjusted to the different ranges of human anatomy. Therefore, adjustability is the key to an ergonomic chair. Office chairs with good ergonomics have features designed to improve posture and offer proper support. These include

adjustable seat height, proper seat depth, adjustable seat tilt, lumbar support, backrest recline, swivel, armrests, comfortable materials, wheels among others. Ergonomic stools are a compromise between sitting and standing at a desk. These stools combine comfort and ease while stimulating the body metabolism. Active sitting is thereby promoted (one of the keys to healthy ergonomics). Ergonomic stools must have proper seat width, sloping edges on the seat, adjustable height, even, rounded, rubber-based allowing secure movement. Most office jobs require some kind of desk but a static desk height can make active sitting hard to engage in. This concept involves changing the sitting position more frequently as it also means alternating working position between sitting and standing at a desk. An ergonomic desk should have adjustable height, sturdy legs, proper length and width that allow elbows to comfortably rest at 90 degrees, must be made of quality materials.

The Ergonomics of Standing: Scientific research surrounding the impacts of excessive sitting and the benefits of standing more is conclusive. Standing is a natural human posture and by itself poses no particular health hazards, contrariwise, working in a standing position regularly can result in swelling of the legs, varicose veins, stiffness in the neck and shoulder, sore feet, general muscular fatigue among many other health issues. Keeping the body in an upright posture requires considerable muscular effort as standing effectively reduces the blood supply to the loaded muscles. The onset of fatigue causes discomfort in the muscles required to maintain upright position in the legs, back and neck. The antidote to sitting too much is standing up while changing working positions every thirty minutes viz-a-viz: sit, stand, wriggle and stretch. A healthier work-style is achieved with a movement mindset in place. This movement mindset ensures secretaries have less sprains, strains, aches and pains as they become more efficient, under less stress, and cope with less fatigue. Fewer employees leaving work to visit a clinic or

doctor and fewer absences plus lost work time will be recorded. The organization will have a happier and more satisfied workforce who will be able to work longer and be less likely to retire early. Office ergonomics intervention helps decrease body strain and reduces the risk of repetitive strain injuries.

Discomfort of working in a standing position: In order to reduce the discomfort of working in a standing position, adjustment should be made to the height of the work according to body dimensions, using elbow height as a guide. Organization of the work area to accommodate easy reach should be ensured. The object of work should be focused on while keeping the body close to the work. Adjustment should be made to the workplace in order to get enough space to change working position. A foot rail or portable footrest may be used to shift the body weight from both to one or the other leg and a seat may be used whenever possible while working, or at least when the work process allows for rest.

Do Not Copy, Lead City University, Nigeria

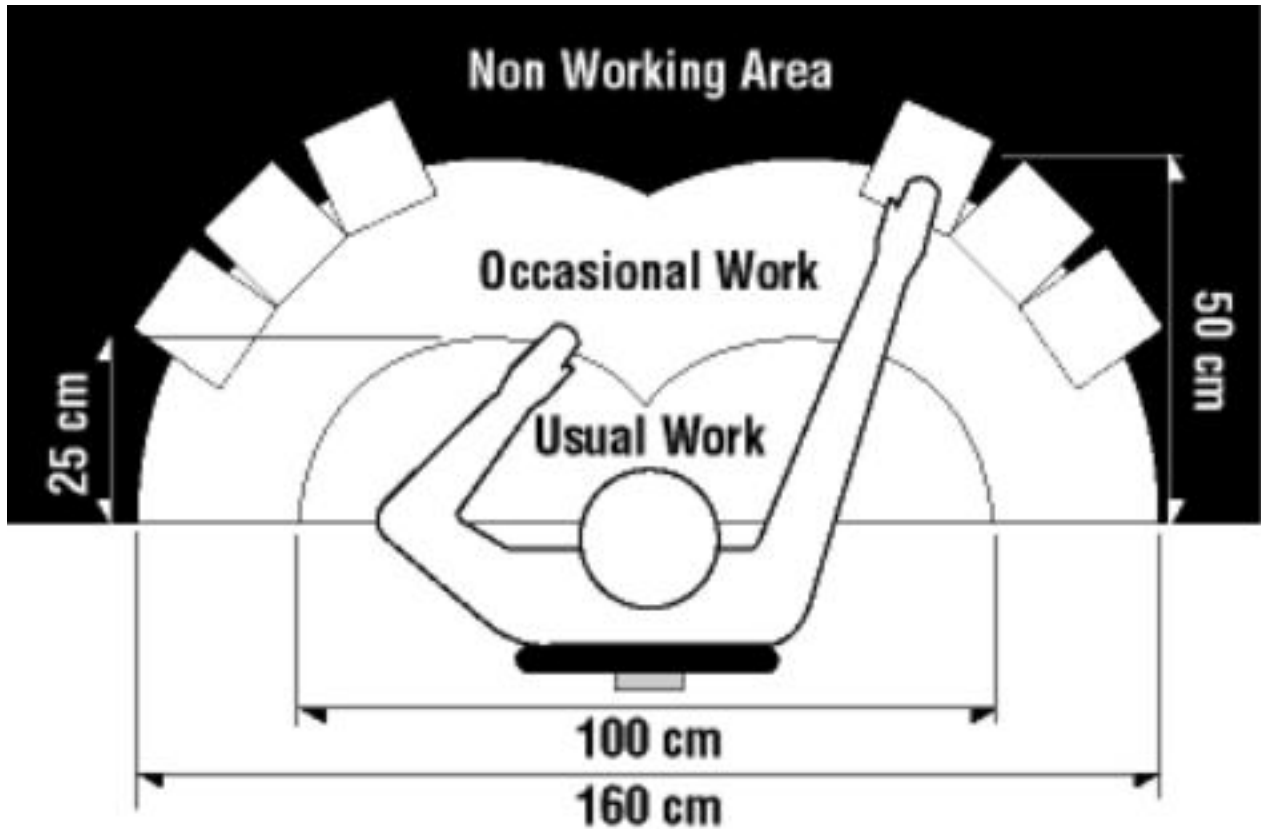


Fig 2.1. Graphical representation of the work area in working in a standing position.

Source: Working in a Standing Position - Basic Information. Canadian Centre for Occupational Health and Safety (CCOHS)
<https://www.ccohs.ca>

Research has identified some common injuries resulting from bad posture as the underlisted:

Tendonitis: Tendonitis is the commonest problem, involving tendon inflammation and localized pain in the elbow, forearm, wrist or hand that occur in the body basically after many years of accumulated wrong posture. Bad posture can cause fatigue, muscle strain, and, in later stages, pain. Back pain, one of the most common complaints of older men and women, is usually the result of many years of faulty posture. In addition, poor posture can affect the position and function of the body's vital organs, particularly those in the abdominal region. Standing up straight usually promote health and good appearance, a secretary will exude confidence and dignity when holding the back up straight using abdomen and back muscles.

Repetitive Strain Injury (RSI): Repetitive Strain Injury results from forceful, awkward, and/or repetitive use of the limbs thereby producing damaged muscles, tendons, and nerves. The severity of RSI cases varies widely. Tendonitis is the most common example of repetitive strain injury, while carpal tunnel syndrome is a more rare and serious disorder. RSI occurs frequently among computer users, secretaries, musicians, lab workers, and other people with occupations requiring repetitive movements⁷³. Although RSI is a broad term that encompasses several disorders, general symptoms include tingling or loss of sensation in fingers, inability to grasp objects between thumb and fingers, decrease in the size of hand muscles, and pain in the wrist, elbow, shoulder, or neck. It is possible for anyone suffering from these symptoms to get immediate medical attention to increase the chances of quick and total recovery while activities causing the pain should be discontinued. The work activities can be varied so the keyboard and mouse would not be used for long periods of time if using a computer becomes painful but necessary.

In order to prevent RSI, the desk and computer area should be adjusted to promote good posture. Sitting still for longer periods of time should be avoided by getting up and moving around as much as possible. This may involve taking 30-60 seconds breaks every ten minutes or getting up to walk around and stretch the body muscles every hour. Motions can be varied by changing tasks; type for a while, then read, take notes by hand, or organize papers. Stretching the wrists, shoulders, and neck will help reduce muscle tension. Rolling the shoulders, rotating the head from one side to the other, massaging the shoulders, and stretch the wrists by pulling the fingers back toward the wrist are all varied motion changing strategy. Banging on the keyboard should be avoided when typing and lazy wrists, too. It should however, be noted that using a brace or taking pain relievers does not deal with the primary cause of RSI and may lead to further injury.

Carpal Tunnel Syndrome: Carpal Tunnel Syndrome (CTS) and thoracic outlet syndrome are two of the most disabling repetitive strain injuries. These conditions are disorders of the tendons, nerves, arteries, or veins occurring at the wrist and upper arm, respectively. In CTS, repeated bending or use of the wrist and fingers results in the compression of the median nerve (runs along the palm side of the wrist) causing intermittent numbness, tingling, and pain in the side of the hand including the thumb through the inside of the ring finger. The hand's communication with the brain is disrupted and the fingers have difficulty sensing temperature and gripping objects. Victims may also notice swelling of the hand and forearm. Pain and numbness in the fingers not only occur while typing, but also at night. The advanced stage is characterized by decreased muscle bulk in the thumb area and decreased sensation. When left untreated, these symptoms can become chronic and permanently disabling, and may cause a change in one's lifestyle and career.

Computers and Eye Strain: Carpal tunnel syndrome is probably the most widely known repetitive strain injury (RSI), but eyestrain is the most common. Left uncorrected, eyestrain can lead to general fatigue, increased myopia (nearsightedness), and a decrease in overall efficiency. Everyone is at risk for eyestrain, especially those who work at a computer for more than three hours a day. Eyestrain usually results in a combination of any of headache, dry eyes, "gritty" feeling in the eyes, blurred vision, eye fatigue, changes in color perception, rotator cuff injuries (affects the shoulder), epicondylitis (affects the elbow), trigger finger, muscle strains and low back injuries⁷⁴. In addition, while attempting to view the screen more clearly users tend to hold their heads in unnatural positions, which contributes to neck and shoulder pain. When any of these symptoms appear they inevitably foster decreased visual efficiency and increased typing errors.

Eyestrain is primarily a result of overworking the muscles of the eyes. This can happen in four ways. The first is simply a result of human evolution: our eyes have evolved to see at a distance in a three-dimensional world, but a monitor presents the user with a close-up, two-dimensional environment. As a result, after hours in front of the computer, the eye focusing point extends beyond the screen and out to a resting point of accommodation. This causes the user to exert extra effort to keep the eyes focused on the screen. Glare is another common factor in eye muscle fatigue. More like a television screen, a glare on the monitor makes the eyes work harder to discern an image on the screen. In their natural resting position, the eyes accommodate a field of vision straight ahead and slightly down. Another way to overwork the muscles of the eye is to use rapid, repetitive movements such as darting the eyes between a source document and the screen.

Aside from eye muscle fatigue, the eyeball itself can become irritated, contributing to eyestrain. Studies have shown that while staring at a monitor, users "forget" to blink which deprives the eye of needed moisture. This is exacerbated by the dry, hot air most monitors and computer CPUs generate and disperse into the environment. Irritation is another source of dust which most monitors create (electrostatic field) that propels particles toward the user and into the eyes. All of these things create a hostile environment for the eyes.

No matter what type of environment an office worker works in, there are some steps to be taken which goes a long way towards reducing eyestrain. Such steps include blinking: blinking is an involuntary action most computer users do not notice its usefulness that they blink much less in front of the screen. Another helpful step is to rest the eyes at least every two hours by taking a break, doing a simple exercise or doing a non-computer related task. Even diets can help cut

down on eyestrain as the natural oils in certain fish and potassium-rich foods like bananas and potatoes also help keep the eyes well-lubricated.

In a well-designed workplace, the worker has the opportunity to choose from among a variety of well-balanced working positions and to change between these positions frequently. Working tables and benches should be adjustable. Being able to adjust the working height is particularly important to match the workstation to the worker's individual body size and to the worker's particular task. Adjustability ensures that the worker has an opportunity to carry out work in well-balanced body positions. If the workstation cannot be adjusted, platforms to raise the shorter worker or pedestals on top of workstations for the tall worker should be considered.

Organization of the work space is another cogent aspect that should be taken into consideration. There should be enough room to move around and to change body position. The provision of built-in foot rails or portable footrests allows the worker to shift the body weight from one leg to the other. Elbow supports for precision work help reduce tension in the upper arms and neck. Controls and tools should be positioned so the worker can reach them easily and without twisting or bending. Where it is possible, a seat should be provided so that the worker can do the job either sitting or standing. The seat must place the worker at a height that suits the type of work being done. For work that requires standing only, a seat should be provided in any case to allow the worker to sit occasionally. Seats at the workplace expand the variety of possible body positions and give the worker more flexibility.

The benefits from greater flexibility and a variety of body positions are two-fold. The number of muscles involved in the work is increased which equalizes the distribution of loads on different parts of the body. Thus, there is less strain on the individual muscles and joints used to maintain

the upright position. Changing body positions also improves blood supply to the working muscles. Both effects contribute to the reduction of overall fatigue.

Office Safety

Office Safety refers to the working environment in an organization that encompasses all factors that impact the health, well-being and safety of the people working therein⁷⁴. It is the practice of ensuring a safe working environment devoid of the likelihood of accidents, injuries, harms, property damage and loss of life in the workplace for both employees and visitors. Often, manufacturing companies and other organizations do consider the office area an eminently safe place and give little thought to hazards that might exist in the office section. However, this assumption was changed when more accurate records were compiled for the entire work force and it was found that office workers were suffering from many injuries. These injuries perhaps, not as severe as those suffered in the workshop or in other operations (industries) but often severe enough to cause loss of time and contribute to a poor overall record. Recently, special emphasis is placed on office safety programmes. Office safety programmes need to be a little more sophisticated since the hazards are not always obvious and the type of people involved (mostly women) need be convinced that hazards really exist in the office settings.

In construction companies or any other similar organizations, most of the employees have witnessed numerous serious accidents and can relate to the problem, whereas in the office settings, the injuries are often not severe and do not happen frequently. On the other hand, since the ratio of white-collar workers to blue-collar ones have been on the increase, the problem of safety for the office secretary need being given increased attention. Different local and international legislations are being updated to ensure employee's safety in organizations as they

perform their daily routine tasks. Failure to comply with these legislations on health and safety for organizations means committing a criminal offence and can be prosecuted³⁹.

Causes of Office Accidents

Slips and falls: The principal causes of major injuries in an office are slips and falls. The hard-surfaced plastic or other tile floor that can become slippery if not properly maintained that many offices have plus the fact that many dress-shoes (for both men and women) have a hard material for heels, produces a combination conducive to slipping. Studies of office accidents indicate that the number of injuries from falls is twice as high for office workers as for other category of employees⁷⁵. This then is an important area of office safety to concentrate on.

Office Layout: Improperly laid-out office will definitely cause accident(s). Wrong placement and arrangement of office furniture, file cabinets, waste-bins, storage lockers, cleaning equipment and so on can add to the problem of office accidents. Solid doors constitute another form of hazard as workers are often struck seriously when the door opens unexpectedly towards them. Doors with large glass areas that are not conspicuously marked to prevent individuals from walking into it, is another source of accident.

File Cabinets: The prevalence of file cabinets in offices often leads to accidents. The most serious occurs when a file cabinet topples over on an office worker. Opening more than a single drawer at once, placing heavily-filled drawer in the upper part of the cabinet, half-full drawer in which its content is concentrated in the front part of the drawer, leaving file cabinet drawers open after use etc. will cause tripping accidents and often result in laceration(s).

Electrical Office Equipment: Almost every office, regardless of its size is now being equipped with a variety of electrically-powered equipment. With proper outlets close to desks and

worktables, there will be no necessity for running long extension cords that can become tripping hazards. A sudden shock or even an unexpected tingle from a snorted piece of office equipment can produce a quick, unplanned movement from an employee which may result in an injury.

Fire Precautions: The greatest cause of fire accident in an office is probably smoking and matches. Some solvents like kerosene and petrol are used in offices, but are usually present in small quantities and are often flammable. Extensive use of electrical equipment (overload currents) as well as damages to electrical sockets in the office can also be another potential fire hazard. Other sources of office hazards include:

Liquids such as hot coffee or drinks being carried around the office which its spillage can cause a scald. Wet spots can result from spillage of oil on the floor as a result of servicing a piece of office equipment and may cause slipping hazards. Also, wet floor and bad weather can make employee's feet wet causing slipping and falling accidents. Laceration is another of the office hazards that may result in bleeding. Health emergencies in form of fainting, epileptic fits, asthma attacks, diabetic disturbances and stomach troubles can equally result in injuries. Lifting and moving office equipment without care or caution can also cause office hazard. Hazards resulting from information technology (Visual Display Units), stress, Repetitive Strain Injury (RSI) and Tenosynovitis which affect the tendon sheaths in the hand, wrist and arms are another form of office injuries.

Safety Training: Health and safety with regards to preventing accidents and ill-health should be a key priority for any organization irrespective of the size of such an organization. Workplace safety training is a process that aims at providing the workforce with the appropriate knowledge and skills to perform work in a safer way both for the employees and their co-workers. Safety

training encourages a great incident-reporting culture in order to effortlessly create a safer workplace which goes a long way to identify an organization as such with positive safety culture as well as can continually improve its workplace environment. The law requires that an organization provide whatever information, instruction and training needed to ensure, so far as is reasonably practicable, the health and safety of its employees⁷⁶. Statistics have emphasized the necessity of conducting safety training for employees as there being around 3.2 million non-fatal workplace injuries in the United States in 2020⁷⁷. More than 6,000,000 people died from hazardous substances in 2020⁸. Slips and falls are the major causes of workplace injuries. In fact, 75% of occupational injuries are due to slips and falls⁷⁸. According to OSHA, safety training can save at least \$4 to \$6 for every \$1 invested⁷⁹. Some basics that every secretary should be aware of include understanding how to prevent accidents and injuries, knowing what to do if an accident or injury does occur, and being familiar with the types of hazards that are present in their particular work environment.

Workplace safety training helps increase employee's awareness thereby reducing workplace accidents and injuries. It ensures employees are not injured or made ill by the work they do. Safety training puts in place, the development of a positive health and safety culture, where safe and healthy working becomes second nature to everyone. It protects organizations against legal penalties.

Office Security: Office security is becoming an area of significant concern in organizations today. Office security has two dimensions – protection of the organization's property (ies) including vital information that if stolen or lost would have dire consequences on the organization's ability to continue to function and employees' safety at work in terms of lack of harassment from

external factors as well as safety of lives. Employees' life and personal property must be secure. No employee will like or even want to work in an insecure environment. When security is not ensured, workers psychological well-being is in shambles and this will inadvertently reduce the secretary's efficiency and job satisfaction. Moreover, the fear of illegal entry, destruction of important records or equipment, disclosure of information, or just malicious vandalism has prompted offices to re-examine security needs and take precautions for the office physical properties and information.

Security must be a physical environmental concern both inside and outside the office (alertness and vigilance of all staff). Offices must be especially careful of violations in any safety precaution(s) adopted. Among the factors that should be examined to determine the need for and the extent of security are office equipment and machines, computer terminal, data file, furniture and life. The following types of security devices are commonly used⁸⁰: Access-restricted devices such as photo IDs, push button locks, card-lock systems and physical attribute systems that make use of fingerprint and eye-oriented systems; Automatic light control systems that are activated either by motion or body heat sensors; Intrusion-alarm and sound-alarm systems that automatically summon police units; Closed-Circuit Television (CCTV); Passwords to secure vital data stored within a computer system or using a combination of passwords and the security devices; Trained security guards from reputable security outfits.

Considering the afore-mentioned, the employee's perception or mental representation of the meaning of values of their workplace settings, relationships amidst fellows among others may make secretaries become pleased with their occupation or not. An employee's may vary about satisfaction or dissatisfaction as some workers may feel a sense of achievement in their occupation as other employees may not. A survey of blue and white collar employees were

carried out and it was characterized by great determination that finishing exciting projects was not as vital as job safety and recompense for blue collar workers⁸¹.

This literature review reveals that a large number of factors influence employee's performance such as satisfaction from the profession, work environment, compensation policies and demographic variables, educational qualification among many other factors.

2.1.3 Concept of Safety Culture

The safety culture of an academic institution reflects the broad spectrum of established safety related to human, organizational or contextual, and technological aspects prevailing in the entire organization. It entails observable, tangible factors, being the safety management of an organization, the physical working environment, and how individuals behave in relation to safety. In addition, it entails non-observable, less tangible factors, being the values and attitude of individuals in relation to safety, and the shared perceptions of safety. All these safety-related aspects interact with each other in a dynamic way. Differences within an organization can manifest themselves into different sub-cultures. The rationale behind this definition originates from both experiences in the work field and commonalities among safety culture definitions that can be found in the literature⁸². Firstly, a turn should be made to experiences from the work field. Due to the complexity of safety culture, a simplified conceptualization is inapposite and will lead to a distorted picture of reality. Previous research has shown that models, and the practical tools derived from these models, tend to only address a subset of the concept of safety culture without adhering to a comprehensive viewpoint and approach. To adhere to this need for a comprehensive viewpoint and approach, a broad spectrum of safety-related aspects is included in

the definition, which takes into account human aspects, organizational or contextual aspects, and technological aspects interacting and interrelating with each other.

Safety culture assessments often place the main emphasis on human behaviour, while diminishing the importance of other human aspects, such as the safety values and attitude, and the organizational and technological aspects prevalent in an organization⁸³. Aside from experiences from the work field, the used definition originates in commonalities among safety culture definitions abound in the safety literature. When disentangling the different parts mentioned in the definition above, the 'broad spectrum of safety-related aspects' refers to the multidimensionality of the concept of safety culture. The broad spectrum also means the inclusion of both type I-safety (which addresses possible accidents with a high probability and a low impact) and type II-safety (which addresses possible accidents with a low probability and a high impact). The trichotomy of 'human, organizational and technological aspects' is assumed as a fundamental safety principle⁸⁴. The trichotomy is based on systems view and emphasizes interactions and interdependencies between the three aspects, and it is also seen as an approach to understanding complex systems. The 'established' aspects refer to the characteristics of a safety culture (or the broader organizational culture) as being relatively stable and resistant to change⁸⁴. A recurrent characteristic in the academic literature is that a safety culture is shared between people.

The 'entire organization' emphasizes the contribution to the safety culture of an organization by everyone, at all levels of the organization. The 'interaction' refers to the general assumption that several interacting elements or factors form the safety culture of an organization. The 'different sub-cultures' reflect the assumption that results of a safety culture measurement may differ within a single organization between, for instance, departments or positions. The given definition

of organizational safety culture only reflects internal safety aspects. However, organizations exist within a broader context that also has its impact on the organizational culture in general and the safety culture in particular. Besides the national culture, external factors entail the political situation, the socio-economic status, the level of technological development of a country or a region, and the local prevailing (safety) policies, regulations, and legislations. For instance, prevailing safety regulations can affect the standards to which the physical workplace has been built⁸⁵.

A model of safety culture that has three distinct, dynamic and interactive factors (person, behaviour, and environment) was developed. Ten principles that form the foundation for a total safety culture was presented and these ten principles for achieving a 'total safety culture' within the workplace include: employee-driven safety rules and procedures, a behavior-based approach, a focus on safety processes; not outcomes, a view of behaviour being directed by activators and motivated by consequences, focus on achieving success, not on avoiding failure, observation and feedback on work practices, effective feedback through behavior-based coaching, observation and coaching as key activities, the importance of self-esteem, belonging and empowerment and safety as a priority rather than a value. Three years later, Total Safety Culture model that includes 'the safety triad' and recognizes the dynamic and interactive relationship between person, environment and behaviour was formulated. Again, the ten principles or values that form the basis of a total safety culture was advocated for⁸⁶.

A researcher presented a model that recognized the presence of an interactive or reciprocal relationship between psychological, situational and behavioural factors of safety culture⁸⁷. It was claimed, from this research, that organizational culture is the product of multiple goal-directed interactions between people (psychological), jobs (behavioural), and the organization

(situational). It was further suggested that people can neither be deterministically controlled through their environment nor entirely self-determining, but they and their environments influence one another in a perpetual dynamic interplay. The Reciprocal Safety Culture Model revealed that attitudes and perceptions can be assessed through safety climate questionnaires. Actual safety-related behaviours are assessed through checklists developed as part of behavioural safety initiatives. Furthermore, situational features are assessed through safety management systems audits/inspections. This reciprocal framework has the potential to quantify the relevant components of safety culture and can be measured independently or in combination.

Organizations need individuals who are proactive in participating and initiating improvements in safety whose behaviours are referred to as Situational Citizenship Behaviour (SCB). SCB is a higher order construct that consists of different types of behaviours such as stewardship, voicing one's opinion, helping co-workers, whistle-blowing, initiating workplace change, and civic virtues⁸⁸. SCB is a subcategory of Organizational Citizenship Behaviour (OCB). Like OCB, although these behaviors are not directly incentivized and are not part of a reward system, they serve to promote effective functioning of an organization. The concept of citizenship behaviour is based on the principle of reciprocity which implies employees having high-quality relationships with their supervisor, which are based on trust and support, in so far as there is engagement in behaviours that are valuable to the organization⁸⁹.

The term safety culture gained its first official use in an initial report into the Chernobyl accident⁹⁰ which introduced the concept explaining the organizational errors and operator violations that laid the conditions for disaster. Public Inquiry reports have implicated poor safety culture within operating companies as a determinant of several high-profile accidents since the explosion on the Piper-Alpha oil platform in the North Sea as an example; the fire at King's

Cross underground station; the sinking of the Herald of Free Enterprise passenger ferry; and the passenger train crash at Clapham Junction. The relevance of safety culture to safe operation cannot be disputed. Indeed, it is a concept 'whose time has come'. However, there is no definitive definition of the concept for two main reasons: (i) different researchers emphasize different elements of safety culture as most salient, and (ii) culture of any kind is an extremely difficult concept to succinctly define.

Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventative measure'. Most definitions of safety culture encapsulate beliefs, values, and attitudes that are shared by a group. As human behaviours (and thus at an individual level, safe or unsafe behaviours) are partly guided by personal beliefs, values, and attitudes, continued workplace safety may have its base in individually and organizationally constructed shared beliefs that safety is important. A related theme evident in the definitions of safety culture offered is that of individual norms. A culture is comprised of social norms, which are unspoken rules of behaviour that, if not followed may result in sanctions. An example of a positive safety norm may be that the workforce reports all procedural irregularities whereas another example of a less positive safety norm may be that work is conducted on live equipment when under time pressure, that is, without isolating equipment. Understanding the safety culture of an organization, work site or work-group as a whole may be difficult but identifying and understanding the dominant safety norms may be a more manageable method of attending to specific issues⁹¹.

In practice, the creation or enhancement of a safety culture is dependent upon the deliberate manipulation of various organizational characteristics thought to impact upon safety

management practices. The very act of doing so means the manipulations must be goal-directed. Goal-setting theory may also serve to provide the requisite scientific utility as it becomes apparent when the specific purposes of the safety culture definitions outlined above are examined. These include producing behavioural norms; reductions in accidents and injuries; ensuring that safety issues receive the attention warranted by their significance; ensuring that organizational members share the same ideas and beliefs about risks, accidents and ill-health; increasing people's commitment to safety, and determining the style and proficiency of an organization's health and safety programmes. Each of these purposes can be viewed both as sub-goals (i.e. antecedents) that help an organization to attain its super-ordinate goal (i.e. creating a safety culture), and goal-achievements (i.e. consequences) emanating from the creation of an organization's safety culture. If these goal theory concepts are accepted, the creation of a safety culture simply becomes a super-ordinate goal that is achieved by dividing the task into a series of sub-goals that are intended to direct people's attention and actions towards the management of safety. In goal-theoretic terms, performance is a positive function of goal-difficulty⁹².

The greater the challenge, the better people's performance tends to be (assuming the challenge is accepted). Setting a difficult super-ordinate goal (i.e. creating a safety culture) will therefore place challenging demands on individuals, workgroups, departments, and the organization as a whole. Dividing the task into more manageable sub-goals that are in them challenging and difficult (e.g. conducting risk assessments, getting senior managers to walk the talk, etc.) should lead to much greater overall goal-attainment of the super-ordinate goal. Nonetheless, goal-attainment is known to be affected by a number of moderators such as Ability, Goal-commitment, Goal-conflict, Feedback, Task complexity, and Situational constraints, as well as mediators such as Direction of attention, effort and persistence, Task specific strategies and Self-efficacy. In

safety culture terms, these goal-related moderators could be viewed as being analogous to safety and job-related training (i.e. ability); degrees of commitment to safety at various hierarchical levels (i.e. goal-commitment); safety versus productivity, quality, etc., (i.e. goal-conflict); communication flows (i.e. feedback); managerial versus operatives role functions (i.e. task complexity); and, lack of resources, workplace, job design issues, etc., (i.e. situational constraints). Similarly, the goal-related mediators could also be translated into safety culture terms. For example, direction of attention, effort, and persistence could reflect actual safety-related behaviour(s) at the strategic, tactical and operational levels of the organization; the presence and quality of the organizations decision-making processes could be analogous to task specific strategies. Self-efficacy could be translated into individuals, workgroups, departments and/or business units' confidence in pursuing particular courses of action to bring about safety improvements. Importantly, each of these moderators and mediators can be examined individually and in various combinations, to assess their impact on both the achievement of sub-goals (e.g. conducting risk assessments for all operational tasks) and the super-ordinate goal (i.e. creating a safety culture)⁹³.

Primarily, a workplace with a poor safety culture fosters an environment where errors are more frequently made, and violations are increasingly tolerated. This, in turn, exposes weaknesses resulting from active and latent failures within the system. Moreover, a workplace with a poor safety culture could be characterized by its management's failure to acknowledge, or address the gaps within their safety systems. As a result, these weaknesses linger, and possibly worsen, over a long duration of time. Thus, increasing the likelihood of a potential harmful event to occur, possibly resulting in injury and/or death. Based on this understanding, an "ideal" safety culture has been conceptualized as "the 'engine' that drives the system towards the goal of sustaining the

maximum resistance towards its operational hazards”⁹⁴. In practice, this means that safety culture has significant predictive value for prevention efforts in the Occupational Health and Safety (OHS) setting. Notwithstanding the theoretical importance of the safety culture concept, recent studies have called for the translation of the research on safety culture into intervention efforts that can guide organizations in improving their workplace safety culture⁹⁴.

Several notable publications have attempted to translate safety culture theory into intervention research within the workplace safety culture context. Furthermore, previous systematic reviews have been conducted to evaluate OHS management systems interventions, patient safety culture improvement strategies and active behavioural change safety interventions⁹⁴. However, there have been no systematic reviews undertaken to date that have attempted to evaluate workplace intervention studies that were aimed at improving workplace safety culture. Therefore, the current study aims to identify, and evaluate the effectiveness of, all workplace intervention studies that have been carried out to date, which have been targeted at improving safety culture. Much of the workplace safety intervention research has traditionally been directed at the individual worker level. This approach is very reductionist-focused and assumes the worker is to blame for incidents. To optimize the effectiveness of workplace safety interventions, a greater focus should be given to the development and implementation of safety initiatives at the broader organizational context. This argument is consistent with the theoretical underpinnings of safety culture, which aligns the concept at the group and organizational levels. Thus, the current study also aims to identify the target levels (i.e. organization, work group or individual) of these interventions, and evaluate the influence of the target level on the effectiveness of the interventions.

In a psychologically safe work environment, employees feel that their colleagues will not reject people for being themselves or saying what they think, respect each other's competence, are interested in each other as people, have positive intentions to one another, are able to engage in constructive conflict or confrontation, feel it is safe to experiment and take risks⁹⁵. Behaviourally, psychological safety leads employees to engage in open communication, voice their concerns, and seek greater feedback; all of which are interpersonally risky behaviours. This, in turn, has been found to influence a range of workplace outcomes (e.g., learning and performance) at different levels of analysis⁹⁵. Although psychological safety shares some overlap with trust, psychological safety is conceptually different as it focuses on how group members perceive a group norm, whilst trust focuses on how one person views another. Initial work on psychological safety at the individual and team levels of analysis, empirical research on its antecedents, outcomes, and moderators has been proliferated.

Currently, theoretical perspectives such as social learning, social exchange and social identity theories have predominantly been used by researchers to explain the processes by which psychological safety develops and influences outcomes. Recent review calls upon researchers to utilize alternate theories such as the Conservation of Resources Theory to explain how the psychological safety engendered through access to resources in the work environment motivates employees to invest their resources at work to help others, and stimulate learning, growth and development. In addition, it has been highlighted, how the incorporation of person-situation theoretical perspectives such as Trait Activation Theory might help to explain how the psychological safety climate strengthens the behavioral manifestation of certain personality traits⁹⁶.

The construct of psychological safety is grounded in the seminal work on the organizational change. Psychological safety was described as the extent to which individuals feel secure and confident in their ability to manage change. Since then, other researchers have explored the meaning of psychological safety in work settings. A quarter of a century after the seminal work, in conceptualizing psychological safety as an individual's perception as to whether he or she is comfortable to show and employ him/herself without fear of negative consequences to self-image, status, or career, it was argued that people are more likely to feel psychologically safe when they have trusting and supportive inter-personal relationships with work colleagues⁹⁷. More recently, psychological safety is better treated as a team-level climate and defined as the “shared belief held by members of a team that the team is safe for interpersonal risk taking”⁹⁷. This definition is divergent from Kahn's definition that it is a perception emanating from the individual point of view. Qualitative work was developed and validated a 7-item scale to measure team psychological safety and this measure includes items that capture shared perceptions amongst team members as to whether they believe that others will not reject members for being themselves, team members care about each other as individuals, team members have positive intentions to one another, and team members respect the competence of others.

A review identified 78 empirical studies, conducted over the past 25 years, which have focused on examining the antecedents and outcomes of psychological safety. Among these, 740 studies utilized a quantitative survey methodology and the remainder employed a qualitative interview methodology. Studies adopting a qualitative interview methodology have helped to generate detailed explanations as to why and how psychological safety develops and influences work outcomes. These studies have typically been used as a basis to guide quantitative work. In

contrast, studies adopting a quantitative survey methodology have furthered an understanding of the strength of links between psychological safety and its antecedents/outcomes.

A 2014 review makes three key conclusions about psychological safety (its “role in enabling performance”, its “relevance for understanding organizational learning” and its presence making individuals “more likely to speak up at work”) ⁹⁸. This review also highlights areas for future research – including exploring the factors that promote or reduce psychological safety. Psychological safety has received noticeable attention from scholars and practitioners due to its benefits in working environments such as improving work engagement, knowledge sharing and learning in organizations, citizenship behaviour and satisfaction ⁹⁹. Furthermore, psychological safety was suggested to enhance employee’s creativity and innovation behaviours and task performance.

2.2. Theoretical Review and Framework

2.2.1 Maslow’s Hierarchy of Needs

The Hierarchy of Needs Theory is considered one of the most famous theories in the field of human motivation and one of the first theories that attempt to describe the human behavior towards satisfying the different human needs ¹⁰⁰. The theory is based on the assumption that a need affects a person’s activities until he/she satisfies it, thus the main motivating factor for an individual is his/her desire to satisfy needs. Maslow thought that personal needs can be arranged in an hierarchical order; in essence, once one of these needs has been satisfied, it will temporally lose its effect as a motivator and the person will focus on satisfying the next higher need which has been activated.

A researcher opined that, according to the Hierarchy Theory, people move from the bottom to the top of the need hierarchy through an active cycle of deprivation, domination, gratification and activation. As, when a person feels deprivation (unsatisfied need) in one of the hierarchy levels, this will direct his action toward satisfying this particular need. For example, if a person needs to satisfy his safety and security needs, he will temporarily ignore satisfying his higher-order needs; however, once this need has been met, the higher need will be activated and the individual will try to satisfy it, thus repeating this cycle of action until he reaches the apex of the need hierarchy. In this regard, Maslow categorizes the basic human needs into five levels in an hierarchical order, namely physiological needs, safety needs, social needs, esteem needs and self-actualization needs, which can be illustrated in the following figure:

Do Not Copy, Lead City University, Nigeria

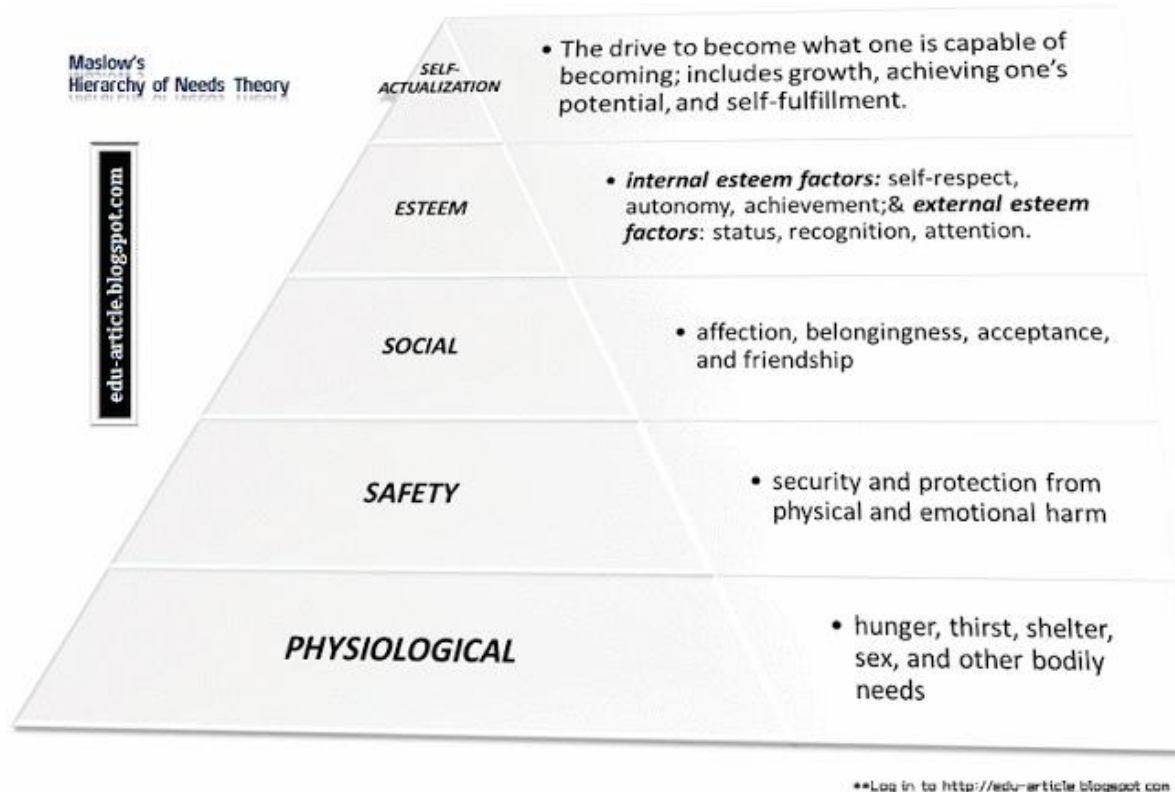


Figure 2.2: Maslow's Hierarchy of Need

Source: J. Morgan, (2022). The Theories of Job Satisfaction. Retrieved October 5. Available from <http://www.iedunote.com>

Physiological Needs: Maslow considered the physiological needs as the basis of the hierarchy. These needs are actually related to the different body and survival needs. For example, it included the need for eating, drinking, sleeping, and shelter. It was argued that these needs are the most dominant needs which an individual tries to satisfy first; in the workplace, this level of needs reflects the employee's needs to have a suitable working environment (clean and fresh air, reasonable temperature, adequate illumination and work-space) and good pay. Once these needs are satisfactorily met, it will lose its effect as a motivator and the safety needs (the second level in the hierarchy) will emerge and dominate the person's behavior.

Safety or Security Needs: These are related to the safety and security of the individual's physical and emotional conditions. It was argued that when the individual feels the need for security, he/she becomes a safety-seeker and tries to satisfy such safety need. This category of needs includes the desire for security, no threats or physical harm, and stability. In the workplace, this level of needs can be satisfied by providing job security (protection against layoff), safe working conditions (safe tools and environment), unionism, health insurance, pension plans among others.

Social Needs: Most people like to be part of a group therefore, when the individual satisfies the two previous needs, the belongingness and love needs will emerge. This category of needs expresses the human needs for receiving love and to belong to a human group and be accepted by others. However, Maslow's choice of the word "love" to address this category may have confusing connotations, such as sex, and it may be more appropriate to use the word "social needs" instead. The spectacular ways of meeting this kind of needs is through interaction as part of a work group, friendly supervision, professional associations, and a cohesive work group.

Self-Esteem: This represents one of the higher human needs as it includes the needs for higher power, higher status, and recognition for good work, achievement, self-respect, prestige, and attention from others. In the workplace, this level of needs can be met by sound job title, good feedback, and a high status job. Maslow argued that, "Satisfaction of the self-esteem need leads to feelings of self-confidence, worth, strength, capability and adequacy of being useful and necessary in the world".

Self-Actualization: According to Maslow, self-actualization is "What a man can be, he must be", and he considered it as the apex of the needs hierarchy. This kind of needs is actually an inner need for developing one's unique potential as an individual. In an organization, an employee

may try to satisfy self-actualization needs by looking for challenging, innovative tasks or to make significant achievements to his job.

After Maslow had set this theory, some researchers made some changes in the theory's format for example, in his study of middle and bottom managers, Porter added a new level that was called "autonomy" between the fourth level (esteem needs) and the fifth level (self-actualization needs). Porter claimed that needs such as those for authority, independent thought and participating in the setting of goals are logically distinct from more common esteem items)¹⁰¹.

Maslow's theory is considered one of the most widely accepted theories in management context and is still very popular among researchers and practitioners. A scholar argued that Maslow's hierarchy theory has proven to be a very useful theory in generating managerial ideas. Moreover, it is still popular among managers because it is very simple to present and easy to understand¹⁰².

It has inspired researchers over the past decades as it generated a number of management approaches and policies such as job enrichment, total quality management, business re-engineering, self-managing teams, and employee empowerment. However, the theory has not always been supported, as it has been subjected to criticisms due to the lack of its empirical support. Indeed, Maslow himself did not try to conduct any empirical research to support his ideas. Some people seem to be self-actualized without satisfying their lower needs within the hierarchy. Moreover, the assumption that self-actualization is the apex of the hierarchy needs was not accepted. Some researchers claimed that the human potential is a boundless and ongoing process, and wondered why the triangle had a close end as a result. They argued that Maslow's theory should be modified and that the triangle should be opened. Overall, Maslow's theory is not the final story in the field of work motivation.

2.2.2 Ecological Theory of Ergonomics

Theories of ergonomics are interrelated and mostly emphasized the interactions between people, product and the environment¹⁰³. When the interactions fit the required ergonomics rule, it is expected that strains would be reduced on the workers, thereby enhancing productivity. Ecological theory of ergonomics fit in the context of this study. The proponents of the theory proposed that the office environment, workplace comfort and office safety affect both organization factors and physical demands of work. Individual factors were also discovered to moderate the effects of the office ecological environment as propounded in the theory. In the context of this study, it is proposed that the work tools, physical office environment and the office workers are the necessary components of the ergonomic practice that were studied.

2.2.3 Reciprocal Safety Culture Model

People are neither deterministically controlled by their environments nor entirely self-determining¹⁰⁴. Instead, they exist in a state of reciprocal determinism with their environments whereby they and their environments influence one another in a perpetual dynamic interplay¹⁰⁵. Both Social Learning Theory (SLT) and Social Cognitive Theory (SCT) explain psycho-social functioning in terms of triadic reciprocal causation, whereby an individual's internal psychological factors, the environment they are in and the behaviour they engage in, all operate as interacting determinants that influence each other bi-directionally¹⁰⁶. SLT and SCT are similar to operant theory in so far as they focus on cognitively-based antecedents (e.g. goals or expectancies), behaviours, and consequences (e.g. self-evaluative rewards and/or punishers), while also stressing the use of observable variables for assessment purposes. Moreover, both also recognize that an employee might model behaviours learnt from observing others. These learnt

behaviours are then further reasoned through self-corrective judgments based on information feedback derived from performance. In turn, as employees master the learnt behaviours, their self-efficacy increases (self-efficacy is defined as the conviction that one can successfully execute the behaviour(s) required to produce the [stated] outcomes).

It was stated that reciprocity does not mean that the different sources of influence are of equal strength, neither do the reciprocal influences occur simultaneously. Rather it takes time for a causal factor to exert its influence and to activate reciprocal influences. This bi-directionality of influence means that people are both products and producers of their environment. In other words, situations are as much the function of the person as the person's behaviour is a function of the situation, indicating that people self-regulate their own behaviour, in so far as they rely on cognitive supports and manage relevant environmental cues and consequences. These same principles are equally valid within organizations, particularly in the domain of managerial decision making which is one of the key routes by which 'pathogens' or 'latent conditions' are introduced into organizations.

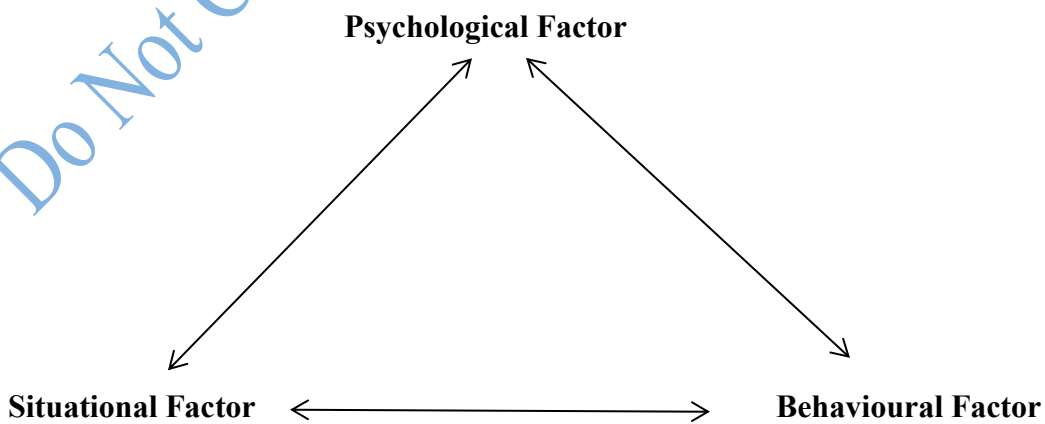


Figure 2.3: Bandura's Reciprocal Determinism Model

Bandura's reciprocal model appears to offer the perfect framework with which to analyze organizational (safety) 'culture' for a number of reasons: Firstly, the psychological, behavioural and situational elements of the model precisely mirror those accident-causation relationships found by a number of researchers. The potency of the Reciprocal Determinism Model for analyzing 'culture', therefore, resides in the explicit recognition that the relative strength of each source may be different in any given situation, for example, the design of the production system may exert stronger effects on someone's work-related behaviour than that person's attitudes. Secondly, its dynamic nature suits the measurement of human and organizational systems that operate in dynamic environments, particularly as the reciprocal influence exerted on each element, by the other two elements, may not occur simultaneously, for example, it may take time for a change in behaviour to exert an influence and activate the reciprocal relationship with the work-flow system and/or work-related attitudes. Thirdly, it provides a 'triangulation' methodology with which to encourage multilevel analyses.

Triangulation refers to the combination of methodologies in the study of the same phenomenon, whereby multiple reference points are used to locate an object's exact position. As such, given the appropriate measuring instruments, triangulation allows researchers to take a multifaceted view of safety culture, so that the reciprocal relationships between psychological, behavioural and situational factors can be examined with a view to establish antecedents, behaviour(s), and consequence(s) within specific contexts. Moreover, triangulation lends itself to testing the external validity of the 'safety culture construct' (i.e. via between-method validation process) and cross-checking each method involved in the triangulation process for internal consistency or reliability (i.e. via a 'within-methods' triangulation approach). Finally, it explicitly incorporates the goal-setting paradigm advocated above via the setting of sub-goals via task-strategies via

self-regulatory processes and via self-efficacy mechanisms. Thinking of the measurement of safety culture in these terms, therefore, provides an organizing framework to assist in ongoing practical assessments and analyses, with which the holistic, multi-faceted nature of the safety culture construct can be more fully examined in depth.

Bandura's Model of Reciprocal Determinism has been adapted to reflect the concept of safety culture. It contains three elements which encompass subjective internal psychological factors, observable ongoing safety-related behaviours and objective situational features. In this adaptation, the internal psychological factors (i.e. attitudes and perceptions) are assessed via safety climate questionnaires, actual ongoing safety-related behaviour is assessed via checklists developed as a part of behavioural safety initiatives, while the situational features are assessed via safety management system audits/inspections. Since each of these safety culture components can be directly measured in their own right, or in combination, it becomes possible to quantify safety culture in a meaningful way at many different organizational levels, which hitherto has been somewhat difficult. Accordingly, the reciprocal framework also has the potential to provide organizations with a common frame of reference for the development of 'benchmarking' partnerships with other business units or organizations. This latter point may be particularly important to industries where there is substantial use of specialist sub-contractors (e.g. construction and offshore), as people from different organizations will be able to communicate in the same language. Additionally, it provides a means by which the prevailing safety culture of different business units, departments or work areas can usefully be compared. The psychological, behavioural and situational elements of the model can also be broken down into exactly the same reciprocal relationships thereby allowing the multi-faceted nature of the safety culture construct to be systematically examined, both within and between the three measurement methods. As

such, the reciprocal model provides an integrative way of thinking about the many processes that impact on safety culture. It also provides a triangulated set of measurement instruments that are not solely dependent upon incident or accident indices, and a dynamic framework that provides the means with which to conduct multi-level analyses of the safety culture construct to identify where cause-effect relationships do and do not exist.

2.3 Review of Empirical Studies

2.3.1 Office Ergonomics and Job Satisfaction

Working conditions play a very pertinent role in influencing job satisfaction. General working conditions have been found to be of cardinal importance in determining employees' job satisfaction. Employees would feel satisfied in their jobs if they are working in a clear and orderly workplace with adequate tools and equipment, acceptable levels of environment, quality, temperature, humidity and noise¹⁰⁷. A scholar noted that working environment can often be a cause of low productivity. Employees need adequate equipment, space, heating, lighting, ventilation and color has also a significant impact on the work environment. Rest rooms and lockers should be clean, secure and well maintained. The food provided should be same for the line employee as well as for the managers, they need to be able to enjoy support from superiors, workplace, friendly co-workers and respect as well. To have a good working environment, managers have to trust them and value them when they fail, they must know that the managers will have a defined process to help them get back on track. Finally, managers need to listen to these workers and accept their workplace ideas. Thus to better understand how to motivate employees, managers should understand the basic theories of motivation.

A scholar discussed the Hawthorne effect where he shows the relationship between employees working conditions, social conditions and productivity¹⁰⁸. The Hawthorne effect was named after

what was doubted the most famous experiment in industrial history it marked a sea change in thinking about work and productivity, Hawthorne, set the individual in a social context. The experiment established conclusively that the performance of workers is influenced by their surrounding and by the people that they are working with. In a working environment, a number of authors are in option that having friendly and supportive colleagues contribute to increased job satisfaction. Participants who lacked support from fellow workers were more likely to suffer from job dissatisfaction. Another survey found that positive relationship with fellow workers enhances job satisfaction. In addition, co-workers are more strongly related to job satisfaction than managerial support¹⁰⁹. Workplace must be in normal condition allowing employees to do their job properly. In work places where there is not sufficient conditions, employee motivation level decreases and such a situation affects job satisfaction negatively.

Studies related to the motives lying behind choosing a career abound in literature. Using both qualitative and quantitative techniques for investigation, majority of them base their interpretations on the traditional classification of intrinsic, extrinsic and altruistic attractors. For example, a researcher found that in a cohort of American students entering teaching profession, altruistic reasons such as making a positive difference in the lives of children were more significant¹¹⁰. Similarly, it was reported that in her study with Canadian prospective teachers, the need to make a difference to students and society as well as the desire to be models for students emerged as the main themes for entering the profession. In a small scale study including trainee teachers of information and communication technology, it was found that trainees frequently draw upon their own past experience of teaching as well as their own interest to explain their career choice¹¹¹.

In another study, it was reported that prospective biology teachers were primarily motivated by their love for biology, while they rated the extrinsic motive of "job security" as the second reason for choosing teaching career¹¹². Similarly, a study on biology pre-service teachers yielded the same results. According to the findings of a qualitative study, prospective chemistry and mathematics teachers were influenced by both intrinsic and extrinsic values emphasizing that, especially, prior positive experience with the subject itself and teachers play a determining role on the choice of teaching career¹¹³. In a large scale study, a scholar investigated the profiles of prospective teachers from different teaching programs and found that more than half of the students voluntarily chose to become teachers. On the other hand, the same group of participants reported more extrinsic reasons such as job security; flexible hours and holidays as well as the possibility of "engaging in secondary employment" as motives that led them to select teaching for profession. In a large scale study comprising pre-service teachers from four universities, it was discovered that majority of the participants chose teaching not as a "fallback" career, that is, last resort but because it was their ideal to teach.

According to literature, the relationship between gender and job satisfaction is inconsistent. Some studies report that women are more satisfied. A scholar found that women's satisfaction has declined substantially in the past decade, whereas men's job satisfaction has remained fairly constant. A scholar, on the contrary, states that female employees demonstrate higher levels of job satisfaction than male employees across most work¹¹⁴. Many studies involving several different populations support this argument. On the other hand, other studies found no significant difference between the genders. Studies have shown that task rewards and organizational rewards lead to job satisfaction. Task rewards refer to rewards that are in direct association with the job such as the usage of one's skills into challenging work, work variety and opportunities.

Organizational rewards are the visible rewards such as pay and promotion¹¹⁵. According to the literature, researches' findings are not consistent regarding the influence of age on job satisfaction. Some researchers have found that age has an influence on job satisfaction. Older employees tend to experience higher levels of job satisfaction. Older employees were more likely to report higher levels of job satisfaction than younger employees. Older workers are more comfortable and tolerant of authority and may learn to lower their expectations for their jobs¹¹⁶. Other studies found that age has a non-linear association (no impact) on job satisfaction or rather statistically age has an insignificant impact. Some studies concluded that as a chronological variable, age is not a predictor of job satisfaction.

Secretaries nowadays consider employees' job satisfaction more than before for the reason that more satisfied employees are more committed to the organization. Many studies have documented that job satisfaction is an important antecedent of organizational commitment¹¹⁷. Affective organizational commitment was found to be most influential with respect to levels of intrinsic and extrinsic job satisfaction. This concurs with other studies of the behavioral outcomes of commitment; overall job satisfaction increases as the years of experience increases. However, a researcher did not support the relationship between job satisfaction and years of experience. Job satisfaction was positively affected by managerial position. That is, managerial employees are more satisfied with their jobs than non-managerial. A scholar also found that employees at the higher end of the occupational scale reported higher satisfaction with various aspects of their work, but were less satisfied with their pay. Whereas the results of another shows no difference between the levels of job satisfaction among different professional roles position do not impact job satisfaction.

A study was conducted on the impact of job satisfaction on employee's performance in Malaysia among large franchised retail chain of works¹¹⁸. They used deferential and descriptive statistics to analyze and interpret the study data. The findings of the study showed that employees are satisfied with their jobs especially in the dimension of co-workers. It was further revealed that office environment is one of the job satisfaction dimensions that receive high satisfaction among employee. They concluded that job performance level among employees was high. The high performance was due to the satisfaction they got as a result of doing their work in a more conducive work environment. A study conducted on employee's performance, the effect of attitude towards work and job satisfaction of managerial and staff of PT Intech, an electronic company in Indonesia¹¹⁹. The Structural Equation Modelling (SEM) technique was used in the collection and analysis of data. The results from the analysis showed that attitude towards work did not have significant impact on the job performance of the staff of PT Intech. Findings showed that job satisfaction had a high significance on employees' performance compared to attitudes towards work.

A research study conducted on the effect of job satisfaction on managerial performance in Bank Nagari Padang Headquarters in Indonesia¹²⁰. The data was analyzed in SPSS (Statistical Package for Social Scientists) and used simple regression in the analysis and interpretation of the data. The findings of the study showed that the co-efficient of job satisfaction gained by 93.4% influenced by the performance of managerial and 6.6% caused by other factors, thus, interpreted that the dominant managerial performance contributes to employee's satisfaction. It was conclusively made that a higher level of job satisfaction gained and felt by all employees is also an increasing managerial performance. It was recommended that in an effort to anticipate competition that occurs in the future, the company is expected to be more active at considering

the welfare of employees to get job satisfaction and higher managerial performance so that productivity and loyalty to the company can be higher.

A scholar in her study on the connection between job motivation, job satisfaction and work performance in the Romanian Trade Enterprises in Rome, she used SPSS and excel Windows in the analysis of the data collected¹²¹. Based on the correlation analysis, the research findings between the variables provided that there is a direct link between employee job satisfaction and their performance. She further found out that the connection between job motivation, job satisfaction and job performance is not linear. In a study conducted in the private sector organizations of Sri Lanka, data were analyzed using co-efficient of correlation to identify the impact of job satisfaction on employees' performance and calculated by using level of job satisfaction as the independent variable and level of performance as the dependent variable. The statistical technique for paired comparison of means was used to determine the satisfaction which is derived from extrinsic rewards. The findings of the study showed that employees' who are at higher levels tend to derive more satisfaction from intrinsic rewards¹²². Sex has no significant impact on job satisfaction. High job satisfaction leads to fewer turnovers of employees in the private sector organization. An empirical investigation done on job satisfaction and employee performance of Greek banking staff in Greece, She used descriptive analysis in the analysis and interpretation of the data collected¹²³. The findings of the study showed that age, gender, years of experience, educational level are very independent of job satisfaction and performance results, The findings further showed that the higher the position of the employee in the organization, the higher the level of satisfaction. It also showed that the factors that impact the satisfaction of an employee also influence that employee's performance. Factors such as

autonomy, team work, clarity of responsibility relationships with co-workers, and cooperation with management show a positive correlation though the intensity varies considerably.

In a research conducted on job satisfaction and job performance among factory employees in Apparel sector in Sri Lanka¹²⁴. The standard statistical analysis of Structural Equation Modelling was used in the analysis and interpretation of the data. The findings showed that job satisfaction positively affects job performance. The findings further stated that when the factory employees are satisfied with their jobs, they like to provide effective works which improve the job performance in the organization. A research carried out by SHRM 2007 (Society for Human Resource Professional) in USA, to top five contributors to job satisfaction were job security, communication between employees and senior management, benefits flexibility to balance work and life issues and feeling safe in the work environment¹²⁵. According to a study conducted on factors influencing employee job satisfaction in Cement Industry of Chhattisgarh in India found out three variables that is environmental (stress and work conditions), organizational factors (fair rewarding, promotion and opportunities) and behavioural factors (adequate authority, salary and supervisors) has a positive impact on job satisfaction. In a research carried out among lecturer in Makerere University in Uganda revealed that the lecturers were relatively satisfied with core workers behavior supervision and intrinsic facets of teaching, their potential source of dissatisfaction were remuneration, governance promotion and physical facilities¹²⁶.

In a research survey of the factors that determine the level of job satisfaction among teachers in top ranking private schools in Nairobi; it was asserted that job satisfaction is a positive state, resulting from the appraisal of one's job experiences. It was added that job satisfaction is a collection of 3 stories and beliefs that managers have about their jobs¹²⁷. It was further argued

that managers who are have higher job satisfaction generally love their job, feel that they are being fairly treated and believe that their jobs have many desirable features such as interesting work, good pay and job security. A research conducted in Kenya on employees' satisfaction and work environment by Peak Network Consultants Ltd, among 50 employees which constituted of senior management, supervisory staff, teaching staff and non – teaching staff. It revealed clearly that these employees were dissatisfied with communication, it was therefore important for management to ensure smooth flow of both up-down and down-up flow of information.

Regarding work environment, employees showed great dissatisfaction on different aspects including: physical working conditions and materials provided to them to perform their work. For employees to be productive, the management needs to avail the right equipment, facilities and materials for employees to feel relieved. The organization should develop clear guidelines on determining and selecting prospective employees for various training and development opportunities. In order to provide good service, the quality of employees is critical to ensure success. It is for this reason that the area of job satisfaction be explored in order to gain a better insight thereof. This will provide executive managers with important information to enable them to stimulate greater job satisfaction amongst employees¹²⁸. Based on the above arguments, the researcher will carry out a research on job satisfaction among teachers in public secondary schools in Teso North Sub County. Employee work performance usually involves motivations and job satisfaction that strengthen or weaken those task performances. There are different approaches to motivation, various types of motivations, as well as the factors that influence job satisfaction, which refers to attitudes of a single employee. These jobs related attitudes predispose an employee to behave in certain ways. Defining motivation at work and establishing how managers can best develop it in their employees has long been a major and central topic of

research for the specialists in the fields of human resource management, organizational behaviour and occupational psychology. It is a field of study characterized by the presence of large numbers of theories, vigorous debates and several distinct traditions. There is no single generally accepted answer to the question of what motivates us to work or what makes a certain job satisfying for a given individual.

However, citing the Durban University of Technology, South Africa, exposed a hope for the Office Management graduates by a scholar¹²⁹. It was affirmed that graduates of Office Management are trained for and can easily secure national and international administrative positions such as: Personal Assistant, Executive Assistant, Office Co-ordinator, Office/Administrative Manager, Administrative posts in the fields of Human Resources, Legal and Accounting. Office managers as would refer to as Office Management graduates, are administrative assistants and could be employed in organizations of every type. They are employed in firms providing services ranging from education and health to legal and business services. Other firms where Office managers may be employed are manufacturing, construction, wholesale and retail trade, transportation, communication, banking, insurance investment, real estate firms, as well as Federal, State, and Local Government agencies. This study therefore, among other significances, is targeted at Office Management graduates who may be employed in any of the above listed positions and fields of work. This means that they are expected to carry out office operations using modern office technologies. For example; a Personal Assistant who may be used to corresponding with a head branch or a highly esteemed customer organization by email may, at some point be required to join an international video conference irrespective of one's location and time zone.

In the year 2020, a host of technological trends are poised for greater adoption; businesses across the globe need to anticipate technological evolutions that may affect business decisions. These changes include Artificial Intelligence (AI), Edge Computing, Automation, 5G, Cyber-security and the Internet of Things (IoT). To face the uncertainties resulting from technological changes, organizations need to build a culture and capacity for innovation, recognize the impact of new technologies and have the foresight to incorporate appropriate new technologies in advance of negative impacts resulting from technological change. A scholar identified a common unwillingness to adopt change simply because of the newness surrounding it. This unwillingness according to the author typically stems from lack of self/situational awareness, poor communication, decisions, lack of accountability, etc.

2.3.2 Safety Culture and Job Satisfaction

A scholar looked at two twin plants (owned by the same company) which manufacture wind turbines¹⁰³. Despite being owned by the same company and producing the same products, one plant (Plant B) had significantly more errors than the other (Plant A). Plant A, prior to the study, was involved in a comprehensive work environment project based on worker involvement and one focus was on safety related issues. Employees from both plants attended a one week introductory course on safety. Accident data (self-reported) was collected at both plants from one year prior to baseline and until six months after the study. Audits were conducted at T0 and T1 and questionnaire data was collected as well. The researchers did not have a formal intervention but the intervention Plant A learned was transferred to Plant B over the course of the study. The researchers found that the self-reported accident data decreased in Plant B. Unfortunately, it is unclear what the work environment project entailed and exactly what knowledge was transferred

from Plant A to Plant B. Thus, it is hard to interpret the researchers' results and make a definite statement about a change in safety culture.

A scholar examined the consistency of safety climate factor structure and safety climate questionnaires over a three year period at a Chinese construction company¹³⁰. Construction workers at the Chinese construction company were given a survey of safety climate in 2004 and again in 2007. The survey consisted of 87-items asking about key aspects of safety climate within the organization. The researchers performed a factor analysis on the items for both years and found that both years comprised the same four-factor structure of safety culture; safety regulations, safety supervision, safety training and work mates' support, management commitment and safety attitude. In addition, the confirmatory factor analysis established that the second-order factor of safety climate was unchanged. While this study found a change in perception over time, the study did not identify a particular safety issue and implement an intervention or training to address this issue. This study does not shed any light unto any quantitative behavioral safety change.

A scholar performed a field study on a large multinational company in which the production workers were employed on a continuous, three-shift, seven day week, 10-day cycle¹⁰⁶. The researchers analyzed the company's accident records and performed in-depth, semi-structured interviews with a random sample of 15% of the workforce. Based on this information, the researchers developed departmental checklists. Safety observers were recruited and undertook two days' training. Following a practice period, a copy of the checklist for each department was displayed in the respective department. The department was also asked to set safety 'goals' for critical behaviors in that department. The observations in each department took about 10 minutes to complete and were done on every shift by the observer touring the department. The results of

the weekly observations were posted in each department to make explicit to the workforce where to focus their attention the following week. The researchers found a steady global improvement in safe behavior performance across the factory as a whole; however, these results were attributed to the goal-setting and awareness exercises (e.g., posting the results of the weekly observations). Further, there was no tie to safety performance explored. Once again, this study does not show any quantitative behavioral change.

A scholar completed a study looking at safety culture at a Norwegian shipping company. Seafaring has historically been one of the world's most dangerous occupations. A self-completion study was administered to 20 ships which included questions about the company's safety culture and the employees' perceptions of safety. The researchers performed a factor analysis on the results and identified four factors: Employee and management's attitude to safety and quality, Knowledge, Attitudes to safety rules/instructions and Quality and safety experience. The researchers concluded that there was a high degree of consensus among respondents regarding safety culture regardless of nationality, vessel or occupation but did not implement any sort of intervention or training and did not show any quantitative change in safety behavior. Three different groups were interviewed working on or with a Norwegian offshore platform: onshore managers, crane operators and process operators¹⁰⁷. The company initiated a safety culture campaign and, a year later, the author interviewed people from all three groups and asked questions about the safety culture campaign, thoughts about safety culture, etc. The researcher concluded that a few lessons learned regarding how to implement safety culture campaigns can be learned from the study: meaningfulness is a prerequisite of successful culture change, safety cultures are created/recreated through group wise negotiation processes, safety culture campaigns should be tailored to specific groups, those wanting to shape safety culture should

participate in the negotiation processes in which cultures are created/recreated and safety culture campaigns should be sensitive to shared patterns of meaning.

A scholar interested in safety culture, conducted a safety climate questionnaire to all sites and all employees at a leading construction company and its subcontractors in Hong Kong¹³¹. The questionnaire entailed 110 items. The researchers performed a factor analysis on the results and found fifteen (15) different factors, the first 10 being: safety attitude and management commitment, safety consultation and safety training, supervisor's role and workmate's role, risk taking behavior, safety resources, appraisal of safety procedure and work risk, improper safety procedure, worker's involvement, workmate's influence and competence. The researchers also performed a logistic regression and found significant relationships between safety climate and personal characteristics, including: gender, marital status, education level, number of family members to support, safety knowledge, drinking habits, direct employer and individual safety behavior.

A researcher looked at two twin plants (owned by the same company) which manufacture wind turbines¹⁰⁹. Despite being owned by the same company and producing the same products, one plant (Plant B) had significantly more errors than the other (Plant A). Plant A, prior to the study, was involved in a comprehensive work environment project based on worker involvement and one focus was on safety related issues. Employees from both plants attended a one week introductory course on safety. Accident data (self-reported) was collected at both plants from one year prior to baseline and until six months after the study. Audits were conducted at T0 and T1 and questionnaire data was collected as well. The researchers did not have a formal intervention but the intervention Plant A learned was transferred to Plant B over the course of the study. The researchers found that the self-reported accident data decreased in Plant B. Unfortunately, it is

unclear what the work environment project entailed and exactly what knowledge was transferred from Plant A to Plant B.

Thus, it is hard to interpret the researchers' results and make a definite statement about a change in safety culture examined the consistency of safety climate factor structure and safety climate questionnaires over a three year period at a Chinese construction company. Construction workers at the Chinese construction company were given a survey of safety climate and again in 2007. The survey consisted of 87- items asking about key aspects of safety climate within the organization. The researchers performed a factor analysis on the items for both years and found that both years comprised the same four-factor structure of safety culture; safety regulations, safety supervision, safety training and workmates support, management commitment and safety attitude. In addition, the confirmatory factor analysis established that the second-order factor of safety climate was unchanged. While this study found a change in perception over time, the study did not identify a particular safety issue and implement an intervention or training to address this issue. This study does not shed any light onto any quantitative behavioral safety change. A study conducted a safety climate questionnaire to all sites and all employees at a leading construction company and its subcontractors in Hong Kong. The questionnaire entailed 110 items¹³². The researchers performed a factor analysis on the results and found 15 different factors, the first 10 being: safety attitude and management commitment, safety consultation and safety training, supervisor's role and workmate's role, risk taking behavior, safety resources, appraisal of safety procedure and work risk, improper safety procedure, worker's involvement, workmate's influence and competence. The researchers also performed a logistic regression and found significant relationships between safety climate and personal characteristics, including:

gender, marital status, education level, number of family members to support, safety knowledge, drinking habits, direct employer and individual safety behavior.

2.4 Conceptual Model

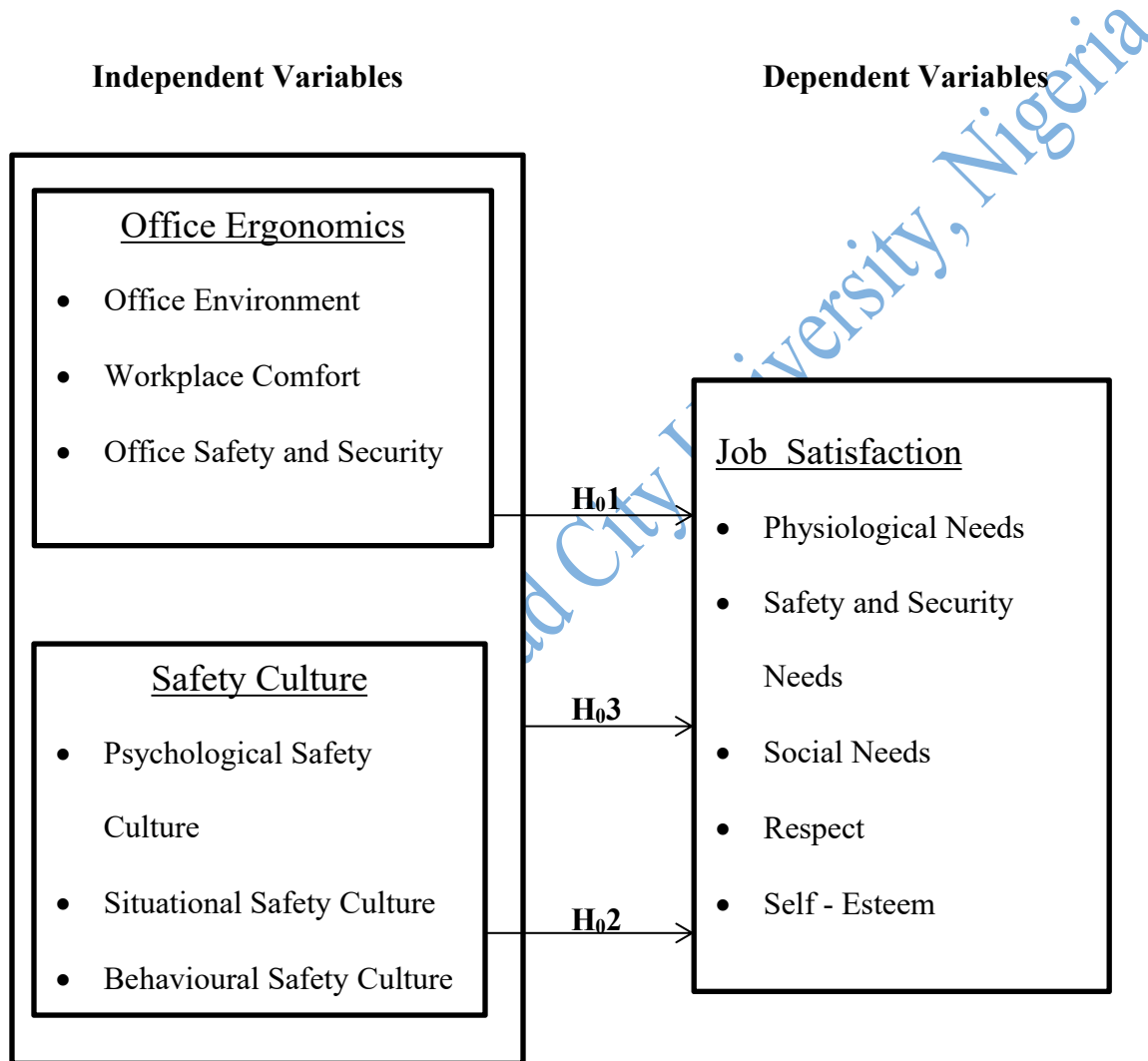


Figure 2.4: Office Ergonomics, Safety Culture and Job Satisfaction Conceptual Model

Source: Researchers Conceptual Framework, 2023

The conceptual model of this study was developed based on the influence of office ergonomics and safety culture on job satisfaction of Secretaries in ICT Polytechnics, Ogun State, Nigeria.

The independent variables are office ergonomics which was measured with office environment, workplace comfort and office safety¹³³ and safety culture which was also measured by psychological, situational and behavioural safety culture¹³³. The dependent variable, Job Satisfaction was measured by physiological needs, safety and security needs, social needs, Respect and Self-Esteem¹³⁴. As shown in the framework above, hypothesis 1 shows how office ergonomics and its metrics is influencing the factors of job satisfaction, hypothesis 2 shows the influence of safety culture on job satisfaction. Overall, these formulated hypotheses were subjected to a statistical test to determine the direction of results, conclusion, and possible recommendations for this study.

2.5 Summary of Literature Reviewed

This chapter (the literature review) sets out the basis for this study relating to office ergonomics, safety culture and job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. The Motivation theory by Maslow was explored, and used for this recent study. Thereafter, the literature also described the measures of each variable as Job Satisfaction; Physiological Needs, Safety and Security Needs, Social Needs, Respect and Self- Esteem while Office Ergonomics; Office Environment, Workplace Comfort and Office Safety and Safety Culture; Psychological, Situational and Behavioural Factors. The next chapter introduces the methodology selected for this study.

Endnotes

1. C. Candido, L. Thomas, S. Haddad, F. Zhang, M. Mackey, & W. Ye, *Designing activity-based workspaces: Satisfaction, productivity and physical activity*. **Building Research and Information**, 47(3), 2019. 275–289.
2. P. O’Leary, & M. Tsui, *The base of social work: Relationship, client, evidence or values?* **International Social Work**, 62(5), 2019, 1327–1328.
3. L. Afshari, *Motivating toward organizational commitment: A cross-comparative perspective*. **International Journal of Cross Cultural Management**, 20(2), 2020, 141–157.
4. B. Bashir, & A. Gani, *Correlates of Organisational Commitment Among University Teachers in India: An Empirical Investigation*. **Asia-Pacific Journal of Management Research and Innovation**, 16(1), 2020, 7–20.
5. S. Bayrakdar, & A. King, *Job Satisfaction and Sexual Orientation in Britain*. **Work, Employment and Society**. 2021
6. I. Berkovich, & R. Bogler *Conceptualising the mediating paths linking effective school leadership to teachers’ organisational commitment*. **Educational Management Administration & Leadership**, 49(3), 2021, 410–429.
7. J. W. Creswell, & J. D. Creswell, *Research design: Qualitative, quantitative and mixed methods approaches (5th ed.)*. **London: Sage Publications**. 2018.
8. N. M. P. De Ruiter, P. L. C. Van Geert, & E. S. Kunnen, *Explaining the “How” of Self-Esteem Development: The Self-Organizing Self-Esteem Model*. **Review of General Psychology**, 21(1), 2017, 49–68
9. L. R. Renaud, M. A. Huysmans, H. P. Van der Ploeg, E. M. Speklé, & A. J. Van der Beek, *Long-term access to sit-stand workstations in a large office population: User profiles reveal differences in sitting time and perceptions*. **International Journal of Environmental Research and Public Health**, 2018, 15(9).
10. A. Richardson, J. Potter, M. Paterson, T. Harding, G. Tyler-Merrick, R. Kirk, K. Reid, & J. McChesney, *Office design and health: A systematic review*. **The New Zealand Medical Journal**, 130(1467), 2017, 39–49.
11. K. J. Hackney, L. P. Maher, S. R. Daniels, W. A. Hochwarter, & G. R. Ferris, *Performance, Stress, and Attitudinal Outcomes of Perceptions of Others’ Entitlement Behavior: Supervisor–Subordinate Work Relationship Quality as Moderator in Two Samples*. **Group & Organization Management**, 43(1), 2018, 101– 137
12. H. Hur, & J. L. Perry, *Job Security Rule Changes and Employee Organizational Commitment*. **Review of Public Personnel Administration**, 40(4), 2020, 641–668.

13. K. Jehanzeb, & J. Mohanty, *The mediating role of organizational commitment between organizational justice and organizational citizenship behavior: Power distance as moderator*. **Personnel Review**. 2019.
14. M. Khosravani, M. Khosravani, F. Borhani, & M. Mohsenpour, *The relationship between moral intelligence and organizational commitment of nurses*. **Clinical Ethics**, 15(3), 2020, 126–131.
15. T. Gnambs, & U. Schroeders, *Cognitive abilities explain wording effects in the rosenberg self-esteem scale*. 2017.
16. I. Aremu, *The key to economy recovery is motivated and skilled workforce*. *Daily Trust*. Retrieved on June 1, 2017 from <https://www.dailytrust.com.ng/news/labour/-the-key-to-economyrecovery-is-motivated-and-skilled-workforce/189972.html>. 2017.
17. Work Safe Australia, *Supporting business to provide a mentally healthy workplace*, 2018 . [https:// www. safeworkaustralia. gov. au/ book/ supporting - business - provide - mentally - healthy - workplace .](https://www.safeworkaustralia.gov.au/book/supporting-business-provide-mentally-healthy-workplace) (Accessed 20 July 2019) .
18. E. van Esch, R. Minjock, S. M. Colarelli, S. Hirsch, *Office window views: view features trump nature in predicting employee well - being*, **J. Environ. Psychol.** 64 (2019) 56 –64.
19. S. L. Albrecht, *Challenge demands, hindrance demands, and psychological need satisfaction: their influence on employee engagement and emotional exhaustion*. **J. Pers. Psychol.** 14, 2015, 70–79.
20. K. Aldrup, U. Klusmann, & O. Lüdtke, *Does basic need satisfaction mediate the link between stress exposure and well-being? A diary study among beginning teachers*. **Learn. Instruct.** 50, 2017, 21–30.
21. A. B. Bakker, & W. G. M. Oerlemans, *Daily job crafting and momentary work engagement: a self-determination and self-regulation perspective*. **J. Vocat. Behav.** 112, 2019, 417–430.
22. S. De Gieter, J. Hofmans, & A. B. Bakker, *Need satisfaction at work, job strain, and performance: a diary study*. **J. Occup. Health Psychol.** 23, 2018, 361–372.
23. E. L. Deci, A. H. Olafsen, & R. M. Ryan, *Self-Determination Theory in work organizations: the state of a science*. *Ann. Rev. Organ. Psychol. Organ. Behav.* 4, 2017, 19–43.
24. T. A. Foulk, K. Lanaj, & S. Krishnan, *The virtuous cycle of daily motivation: effects of daily strivings on work behaviors, need satisfaction, and next-day strivings*. **J. Appl. Psychol.** 104, 2019, 755–775.
25. S. Goemaere, K. Brenning, W. Beyers, A. C. J. Vermeulen, K. Binsted, & M. Vansteenkiste, *Do astronauts benefit from autonomy? Investigating perceived autonomy-supportive*

communication by Mission Support, crew motivation and collaboration during HI-SEAS 1. Acta Astronaut. 157, 2019, 9–16.

26. K. Strauss, & S. K. Parker, “*Effective and sustained proactivity in the workplace: a self-determination theory perspective,*” in *The Oxford Handbook of Work Engagement, Motivation, and Self-Determination Theory*, ed M. Gagne (Oxford University Press), 2014, 50–71.
27. M. L. M. Van Hooff, & I. E. De Pater, *Daily associations between basic psychological need satisfaction and well-being at work: the moderating role of need strength.* **J. Occup. Organ. Psychol.** 92, 2019, 1027–1035.
28. M. L. M. Van Hooff, & S. A. E. Geurts, *Need satisfaction during free evening hours: examining its role in daily recovery.* **Stress Health** 30, 2014, 198–208.
29. M. L. M. Van Hooff, & S. A. E. Geurts, *Need satisfaction and employees’ recovery state at work: a daily diary study.* **J. Occup. Health Psychol.** 20, 2015, 377–387.
30. M. L. M. Van Hooff, & E. A. J. Van Hooft, *Boredom at work: towards a dynamic spill over model of need satisfaction, work motivation, and work-related boredom.* **Euro. J. Work Organ. Psychol.** 26, 2017, 133–148.
31. A. Al-Hosam, S. Ahmed, F. Ahmed, & M. Joarder, *Impact of transformational leadership on psychological empowerment and job satisfaction relationship: a case of Yemeni Banking.* **Binus Business Review.** 2016.
32. A. Ghahramani, S. Salminen, *Evaluating effectiveness of OHSAS 18001 on safety performance in manufacturing companies in Iran.* **Saf. Sci.** 2019, 112, 206–212.
33. S. Li, M. Fan, X. Wu, *Effect of Social Capital between Construction Supervisors and Workers on Workers’ Safety Behavior.* **J. Constr. Eng. Manag.** 2018, 144, 1–10.
34. K. Arifin, K. N. Derahim, K. Aiyub, *Analisis Penilaian Iklim Keselamatan Pekerja Di Bahagian Operasi Sistem Pengangkutan Rel Bandar Malaysia (Analysis of Worker Safety Climate Assessment at Malaysia City Rail Management’s Operation Division).* **Akademika** 2020, 90, 103–113.
35. S. Li, S.; Wu, X.; Wang, X.; Hu, S. *Relationship between Social Capital, Safety Competency, and Safety Behaviors of Construction Workers.* **J. Constr. Eng. Manag.** 2020, 146, 04020059.
36. D. A. Yousef, *Satisfaction with job security as a predictor of organizational commitment and job performance in a multicultural environment.* **International Journal of Manpower.** 19 (3), 1998, 184–194.

37. O. C. Wasonga, "A study of Motivational and Job Satisfaction needs of public Secondary Schools," **Unpublished Med Thesis, University of Nairobi**. 2004.
38. S. R. Kessler, L. Lucianetti, S. Pindek, Z. Zhu, & P. E. Spector, *Job satisfaction and firm performance: Can employees' job satisfaction change the trajectory of a firm's performance.* **Journal of Applied Social Psychology**, 50(10), 563-572.
39. J. Y. Lim, K. K. Moon, & R. K. Christensen, *Does psychological empowerment condition the impact of public service motivation on perceived organizational performance? Evidence from the US federal government.* **International Review of Administrative Sciences**. 2021.
40. Y. Al Horr, M. Arif, A. Kaushik, A. Mazroei, M. Katafygiotou, & E. Elsarrag, *Occupant productivity and office indoor environment quality: A review of the literature.* **Building and environment**, 105, 2016, 369-389.
41. K. Al-Omari, & H. Okasheh, *The influence of work environment on job performance.* **International Journal of Applied Engineering Research**, 12(24), 2017, 15544-15550.
42. J. M. Bernardes, C. Ruiz-Frutos, A. R. P. Moro, & A. Dias, *A low-cost and efficient participatory ergonomic intervention to reduce the burden of work-related musculoskeletal disorders in an industrially developing country: an experience report.* **International Journal of Occupational Safety and Ergonomics**, 27(2), 2021, 452-459.
43. R. Burgess-Limerick, *Participatory ergonomics: Evidence and implementation lessons.* **Applied Ergonomics**, 68, 2018, 289-293.
44. E. M. Capodaglio, *Participatory ergonomics for the reduction of musculoskeletal exposure of maintenance workers.* **International Journal of Occupational Safety and Ergonomics**, 28(1), 2022, 376-386.
45. S. Chowdhury, & P. Chakraborty, Pratim. *Universal health coverage - There is more to it than meets the eye.* **Journal of Family Medicine and Primary Care**, 6(2), 2017, 169-170.
46. D. Herwanto, & A. Suzianti, *An environmental ergonomics review of small medium enterprises workplace condition in Indonesia.* **ACM International Conference Proceeding Series**, 2020, 213-218.
47. D. A. Hofmann, M. J. Burke, & D. Zohar, *100 years of occupational safety research: From basic protections and work analysis to a multilevel view of workplace safety and risk.* **Journal of Applied Psychology**, 102(3), 2017, 375-388.
48. B. S. Koma, A. M. Bergh, & K. M. Costa-Black, *Barriers to and facilitators for implementing an office ergonomics programme in a South African research organisation.* **Applied Ergonomics**, 75, 2019, 83-90.

49. K. Koshy, H. Syed, A. Luckiewicz, D. Alsoof, G. Koshy, & L. Harry, *Interventions to improve ergonomics in the operating theatre: A systematic review of ergonomics training and intra-operative microbreaks*. **Annals of Medicine and Surgery**, 55(January), 135–142.
50. G. Lawson, R. P. Prayutnodi, S. Hermawati, & B. Ryan, *Participatory ergonomics in industrially developing countries: A literature review participatory*. **International Journal of Mechanical Engineering Technologies and Applications**, 1(8), 2021, 53–59.
51. Z. M. Makhbul, & A. A. Muhamed, *Ergonomics workstation environment toward organisational competitiveness*. **International Journal of Public Health Science**, 11, 2022, 157–169.
52. Y. W. Awodi, *Polytechnic education in Nigeria: Opportunities for wealth and job creation, the journey so far. 24th Convocation Lecture, at the Federal Polytechnic, Idah, Kogi State, Nigeria*, May 11, 2019.
53. O. James, *Effect of Office Ergonomics on Office Workers' Productivity in the Polytechnics, Nigeria*, **Journal of Education and Practice**. 2021.
54. F. Cangiano, S. K. Parker, & G. B. Yeo, *Does daily proactivity affect wellbeing? The moderating role of punitive supervision*. **J. Organ. Behav.** 2019, 40, 59–72.
55. G. R. Slemp, M. L. Kern, K. J. Patrick, & R. M. Yan, *Leader autonomy support in the workplace: a meta-analytic review*. **Motiv. Emot.** 42, 2018, 706–724.
56. M. Eklöf A. Pousette & M. Törner. *An intervention in management teams to improve workers safety climate. A mixed methods study of intervention process and effects*. **Safety science monitor**, 20, issue 1, article 4. 2017.
57. L. Nord Nilsson & A. Vänje, *Occupational safety and health professionals' skills – A call for system understanding? Experiences from a co-operative inquiry within the manufacturing sector*. **Applied Ergonomics**, 70, 2018, 279-287.
58. A. Sharman, *From Accidents to Zero. A practical guide to improving your workplace culture. 2nd edition. Routledge: New York*. 2016
59. M. Törner A. Pousette P. Larsman & S. Hemlin. *Coping with paradoxical demands through and organizational climate of perceived organizational support: An empirical study among workers in construction and mining industry*. **The journal of applied behavioural science**, 52, 2018, 117-141
60. S. A. Barnes, J. Compton, M. Saldaña et al. *Development and testing of Baylor Scott & White Health's "Attitudes and Practices of Patient Safety Survey"*. Proc 2016;29: 2019, 367–70.
61. *Australian Commission on Safety and Quality in Health Care. National safety and quality health service standards guide for hospitals*. **Sydney, Australia: ACSQHC**, 2017.

62. L. R. Ginsburg, D. Tregunno, P. G. Norton. 'Not another safety culture survey': using the Canadian patient safety climate survey (CanPSCS) to measure provider perceptions of PSC across health settings. **BMJ Qual Saf** 2014.
63. A. Hogden, L. A. Ellis, K. Churruca. *Safety culture assessment in health care: a review of the literature on safety culture assessment modes*: ACSQHC, 2017.
64. M. E. Schwartz, D. E. Welsh, D. E. Paull et al. *The effects of Crew resource management on teamwork and safety climate at Veterans health administration facilities*. **J Health Risk Manag** 2018;38:17–37.
65. B. Boussat, K. Kamalanavin, P. François. *The contribution of open comments to understanding the results from the hospital survey on patient safety culture (HSOPS): a qualitative study*. **PLoS One** 2018;13:e0196089.
66. N. I. Abu-El-Noor, M. K. Abu-El-Noor, Y. Z. Abuowda et al. *Patient safety culture among nurses working in Palestinian governmental Hospital: a pathway to a new policy*. **BMC Health Serv Res** 2019;19:550.
67. I. Kagan, N. Porat, S. Barnoy. *The quality and safety culture in general hospitals: patients', physicians' and nurses' evaluation of its effect on patient satisfaction*. **Int J Qual Health Care** 2019;31:261–8.
68. J. B. Sexton, K. C. Adair, M. W. Leonard et al. *Providing feedback following leadership WalkRounds is associated with better patient safety culture, higher employee engagement and lower burnout*. **BMJ Qual Saf** 2018;27:261–70.
69. G. Lefebvre, L. Honey, K. Hines. *Implementing obstetrics quality improvement, driven by medico-legal risk, is associated with improved workplace culture*. **J Obstet Gynaecol Can** 2020;42:38–47.
70. J. B. Sexton, A. Frankel, M. Leonard. *SCORE: assessment of your work setting*. Durham, NC: Duke University, 2019.
71. M. J. Johnston, S. Arora, D. King. *Improving the quality of wardbased surgical care with a human factors intervention bundle*. **Ann Surg** 2018;267:73–80.
72. M. L. Kirkegaard, P. Kines, H. B. Nielsen. *Occupational safety across jobs and shifts in emergency departments in Denmark*. **Saf Sci** 2018;103:70–5.
73. L. Roney, C. Sumpio, A. M. Beauvais. *Describing clinical faculty experiences with patient safety and quality care in acute care settings: a mixed methods study*. **Nurse Educ Today** 2017;49:45–50

74. M. D. Cooper, *The efficacy of industrial safety science constructs for addressing serious injuries & fatalities (SIFs)*. **Safety Science**, 120, 2019, 164–178.
75. M. L. Frazier, S. Fainshmidt, R. L. Klinger, A. Pezeshkan, & V. Vracheva, *Psychological safety: A meta-analytic review and extension*. **Personnel Psychology**, 70(1), 2017, 113–165.
76. A. Maslow, *Motivation and Personality*, Harper and Row: New York. 1954.
77. O. James, *Effect of Office Ergonomics on Office Workers' Productivity in the Polytechnics, Nigeria*, **Journal of Education and Practice**. 2021.
78. N. Dutta, T. Walton, & M. A. Pereira, *One-year follow-up of a sit-stand workstation intervention to decrease sedentary time in office workers*. **Preventive Medicine Reports**, 13, 2019, 277–280.
79. M. D. Cooper, *Towards a Model of Safety Culture*. **Safety Science**, 36, 2000, 111-136.
80. A. A. Eyler, A. Hipp, C. A. Valko, R. Ramadas, & M. Zwald, *Can building design impact physical activity? A natural experiment*. **Journal of Physical Activity & Health**, 15(5), 2018, 355–360.
81. J. M. Jancey, S. McGann, R. Creagh, K. D. Blackford, P. Howat, & M. Tye, *Workplace building design and office-based workers' activity: A study of a natural experiment*. **Australian and New Zealand Journal of Public Health**, 40(1), 2016, 78–82
82. G. A. Koeppe, C. U. Manohar, S. K. McCrady-Spitzer, A. Ben-Ner, D. J. Hamann, C. F. Runge, & J. A. Levine, *Treadmill desks: A 1-year prospective trial*. **Obesity (Silver Spring)**, 21(4), 2013, 705–711.
83. C. M. Lindberg, K. Srinivasan, B. Gilligan, J. Razjouyan, H. Lee, B. Najafi, K. J. Canada, M. R. Mehl, F. Currim, S. Ram, M. Lunden, J. H. Heerwagen, K. Kampschroer, & E. M. Sternberg, *Effects of office workstation type on physical activity and stress*. **Occupational & Environmental Medicine**, 75(10), 2018, 689–695.
84. J. Pierce, S. Legg, J. R. Godfrey, & E. Kawabata, *The effects of introducing electric adjustable height desks in an office setting on workplace physical activity levels: A randomised control field trial*. **Work: A Journal of Prevention Assessment & Rehabilitation**, 62(1), 2019, 139–150.
85. S. A. Prince, C. G. Elliott, K. Scott, S. Visintini, & J. L. Reed, *Device-measured physical activity, sedentary behaviour and cardiometabolic health and fitness across occupational groups: A systematic review and meta-analysis*. **International Journal of Behavioral Nutrition and Physical Activity**, 16(1), 2019, Article 30.
86. P. Merino-Salazar, L. Artazcoz, C. Cornelio, M. J. L. Iñiguez, M. Rojas, D. Martínez-Iñigo, A. Vives, L. Funcasta, & F. G. Benavides, *Work and health in Latin America: Results from*

the working conditions surveys of Colombia, Argentina, Chile, Central America and Uruguay. Occupational and Environmental Medicine, 74(6), 2017, 432–439. <https://doi.org/10.1136/oemed-2016-103899>.

87. A. Mihartescu, M. L. Negrut, & M. Misca, *The workspaces and their influence on. Acta technica napocensis Series:*, 64, 2021, 165–170.
88. M. Mokdad, & T. Abdel-Moniem, *New Paradigms in Ergonomics: The Positive Ergonomics. Occupational Health*, 1, 2017, 3–24. <https://doi.org/10.5772/66393>
89. M. Mokdad, M. Bouhafis, B. Lahcene, & I. Mokdad, *Ergonomic practices in Africa: Date palm work in Algeria as an example. Work*, 62(4), 2019, 657–665.
90. K. Nielsen, M. B. Nielsen, C. Ogbonnaya, M. Käsälä, E. Saari, & K. Isaksson, *Workplace resources to improve both employee well-being and performance: A systematic review and meta-analysis. Work and Stress*, 31(2), 2017, 101–120.
91. R. B. Pickson, S. Bannerman, & P. O. Ahwireng, *investigating the effect of ergonomics on employee productivity: a case study of the butchering and trimming line of pioneer food cannery in ghana. Modern Economy*, 08(12), 2017, 1561–1574.
92. U. M. Raja, A. Nawaz, & A. Javed, *Impact of workspace design on employee's productivity: a case study of public sector universities in Hazara division. International Journal of Sustainable Real Estate and Construction Economics*, 1(3), 2019, 201.
93. D. Ravindran, *Ergonomic impact on employees' work performance. International Journal of Advance and Innovative Research*, 6(1(September)), 2020, 231–236.
94. F. S. Sabir, Z. Maqsood, W. Tariq, & N. Devkota, *Does happiness at work lead to organisation citizenship behaviour with mediating role of organisation learning capacity? A gender perspective study of educational institutes in Sialkot, Pakistan. International Journal of Work Organisation and Emotion*, 10(4), 2019, 281-296.
95. S. Sherstha, S. Thapa, L. Mangrati, *Quality of work life (QWL) situation in the Nepalese corporate sector. Quest Journal of Management and Social Sciences*, 1(1), 2019, 119–145.
96. R. M. Sirat, J. M. Rohani, N. Ahmad, A. M. Shaharoun, & H. Haron, *Education level, working experiences and ergonomics training effect on ergonomics awareness and practices in Malaysia. International Journal of Engineering and Technology*, 7(3), 2018, 12–17.
97. L. Sudiajeng, I. W. Wiraga, M. Mudhina, & I. G. N. S. Waisnawa, *Ergonomics for sustainable groundwater conservation program. Atlantis Highlights in Engineering*, 1, 2018, 447–451.

98. M. J. Svendsen, K. G. Schmidt, A. Holtermann, & C. D. N. Rasmussen, *Expert panel survey among occupational health and safety professionals in Denmark for prevention and handling of musculoskeletal disorders at workplaces*. **Safety Science**, 131, 2020. 104932.
99. E. K. Mocheche, J. Bosire, & P. Raburu, Influence of self-esteem on job satisfaction of secondary school teachers in Kenya. *International Journal of Advanced and Multidisciplinary Social Science*, 3(2): 2017, 29-39.
100. M. Halaj, M. Boros, & R. Jankura, *Characteristics, description and assessment of the organization's safety culture subsectors*. In: *CBU International Conference Proceedings: International conference on Innovations in Science and Education*. Czech Republic: Prague: CBU, 2019, 428–434.
101. M. Halaj, & L. Hofreiter, *Methods of security culture assessment*. In: *10th International Conference on Education and New Learning Technologies: EDULEARN18 Proceedings*. Spain: Palma, 2018, 3958–3966.
102. M. Ashutosh, *Exploring the antecedents, drivers, and outcome of Behaviour-based safety: A literature review*, Article in *Psychology (Savannah, Ga.)*, **Pandit Deen Dayal Energy University**. 2021.
103. A. Osman, K. Khalid, F. Mohsen AlFqeeh, *Exploring The Role Of Safety Culture Factors Towards Safety Behaviour In Small-Medium Enterprise*, **International Journal of Entrepreneurship**. 2019.
104. W. Esterhuizen, & N. Martins, *The factor structure of a safety leadership assessment tool for the mining industry*. **Journal of Contemporary Management**, 2016, 13: 1-26.
105. **International Labour Organization. Safety and health at work**. Retrieved from <https://www.ilo.org/global/topics/safetyand-health-at-work/lang-en/index.htm>. 2016.
106. H. Kobuse, T. Morishima, M. Tanaka, G. Murakami, M. Hirose, & Y. Imanaka, Y. *Visualizing variations in organizational safety culture across an inter-hospital multifaceted workforce*. **Journal of Evaluation in Clinical Practice**, 20, 2014, 273–280.
107. M. P. Leaver, & T. W. Reader, *Safety culture in financial trading: An analysis of trading misconduct investigations*. **Journal of Business Ethics**, 154, 2019, 461–481.
108. S. E. Lee, L. D. Scott, V. S. Dahinten, V. S., Vincent, C., Lopez, & C. G. Park, *Safety culture, patient safety, and quality of care outcomes: A literature review*. **Western Journal of Nursing Research**, 41, 279–304.
109. L. A. Murphy, Y. H. Huang, M. M. Robertson, S. Jeffries, & M. J. Dainoff, *A sociotechnical systems approach to enhance safety climate in the trucking industry: Results of an in-depth investigation*. **Applied Ergonomics**, 66, 2018, 70–81.

110. C. C. Queenan, T. J. Kull, & S. Devaraj, *Complements or substitutes? Culture–technology interactions in healthcare*. **Decision Sciences**, 47, 2016, 851–880.

Do Not Copy, Lead City University, Nigeria

Chapter Three

Methodology

This chapter presents the methodology to be used in this study. It includes the research design strategies employed, population, sample, data collection and operation of variables.

3.1 Research Design

This study will adopt a descriptive survey design as it attempts to study a subset of a population at a point in time and to determine influence of office ergonomics and safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. Researches based on this design are conducted to assess the status quo of a particular phenomenon of interest without manipulation of variables. The researcher considered this design as appropriate for this study for the reasons of time saving, expenses saving as well as yielding valid and reliable amount of quality information.

3.2 Population of the Study

The population of this study comprised one hundred and eighty-six (186) secretaries of ICT Polytechnics, Ogun State, Nigeria which include; Gateway (ICT) Polytechnic, Saapade, Abraham Adesanya (ICT) Polytechnic, Ijebu-Igbo, D.S. Adegbenro (ICT) Polytechnic, Itori and Gateway (ICT) Polytechnic, Igbesa. (See Table 3.1).

Table 3.1: Population of the Study

S/N	Name of Institution	Number of secretaries in each Institution
1.	Gateway (ICT) Polytechnic, Saapade	47
2.	Abraham Adesanya (ICT) Polytechnics, Ijebu- Igbo	43
3.	D.S. Adegbenro (ICT) Polytechnics, Itori	40
4.	Gateway (ICT) Polytechnics, Igbesa	56
	Total	186

Source: Ogun State Ministry of Education (2023).

3.3 Sample Size and Sampling Technique

The sample size of this study will be one hundred and eighty – six (186) which is made up of the secretaries of Gateway (ICT) Polytechnic, Saapade, Abraham Adesanya (ICT) Polytechnics, Ijebu-Igbo, D.S. Adegbenro (ICT) Polytechnic, Itori and Gateway (ICT) Polytechnics, Igbesa which was arrived at through total enumeration of the population because the secretaries are not many.

3.4 Description of Research Instrument

Data will be collected using a structured questionnaire titled: Office Ergonomics, Safety Culture and Job Satisfaction (OESCJS). The instrument is a structured questionnaire adapted from previous empirical studies. This study will also adopt the Likert scale design which allowed the respondents provide their opinion about the issue under study. The instrument elicited opinion

and perception of secretaries of the various schools on issues such as Office Ergonomics, Safety Culture and Job Satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

Section A: This section was designed to collect demographic information of respondents and these contains Bio-data of Respondents measured through four factors; Gender, Age, Educational Qualification, Year of Experience.

Section B: This section was designed to collect data on Satisfaction of secretaries. The Satisfaction scale covers these measures such as Physiological Needs, Safety and Security Needs, Social Needs, Respect, Self Esteem which were adapted from scholars in different contexts². Each of the adapted questionnaires was considered reliable given the reliability tested result reported by scholars. The Cronbach's Alpha Co-efficient for the variables were 0.7, 0.8, 0.6, and 0.76 respectively. Sample of the items in the questionnaire include: My job is mentally challenging with variety of job responsibilities, my work gives me a feeling of being around the polytechnic always etc. The response options available to respondents following the modified Likert-type scale include Very high = 4, High = 3, Low = 2, Very low = 1. The number of items in this section is 15.

Section C: This section is designed to collect data on office ergonomics. The office ergonomics scale indicates office environment, workplace comfort and office safety which were adapted from scholar in different context³. Each of the adapted questionnaires is considered reliable given the reliability tested result reported by scholars. The Cronbach's Alpha Co-efficient for the variables were 0.7, 0.8, 0.6, and 0.76 respectively. Examples of questions are: Application of newly learned skills to improve my job efficiency, Ability to study and work with new technological equipment for easy work procedures etc. The response options available to

respondents following the Likert-type scale include Strongly Agree = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1. The number of items in this section is 9.

Section D: This section was designed to collect data on safety culture. The safety culture scale which indicates the level of psychological, situational and behavioural needs of secretaries were adapted from different scholars in varying contexts. Each of the adapted questionnaires are considered reliable given the reliability tested result reported by scholars⁴. The Cronbach's Alpha Co-efficient for the variables were 0.7, 0.8, 0.6, and 0.76 respectively. Examples of questions are: The safety policy statement describes the institution's core beliefs, commitments and responsibilities regarding safety and connects these successes to the success of the institution overall mission and Structures of the institution are established to define and communicate to members of the institution the responsibility, accountability and authority of persons who identify, evaluate or control hazards and risk. The response options available to respondents based on the Likert-type scale include Always=4, Very Often=3, Rarely =2, Never=1. The number of items in this section is .

3.5 Validity of Research Instrument

Face and content validity will be done in order to access the clarity, comprehensibility, appropriateness of the questionnaire. This shall be done with the input of the supervisor and other experts in the field of information management. Corrections made will be incorporated in constructing the final instrument before its use

3.6 Reliability of the Instrument

The researcher will subject the questionnaire to a reliability test to check internal consistency of all items measuring each variable in the study. The reliability of the instrument will be done

through a pilot study using 30 copies of the questionnaire which were administered to office managers of Federal University of Agriculture, Abeokuta which is not part of the study.

3.7 Distribution of Research Instrument

A letter of introduction and project attestation form will be obtained from the Department of Information Management, Lead City University which will be used to gain permission to conduct the survey from the management of all ICT Polytechnics, Ogun State. A two (2) day training will be conducted for five (5) research assistance to ease the administration, retrieval and initial sorting of copies of the questionnaires. The researcher and research assistants will work with the human resource manager of the institutions to ensure confidentiality of their responses while briefing them on the need for adequacy of responses and advantages embedded in the findings of the study. The copies of questionnaires will be given to the institutions according to the proportionate sample.

3.8 Methods of Data Analysis

Data will be collected from respondents and would be analyzed using the descriptive and inferential statistics. Descriptive statistics (frequency distribution, simple percentage and mean) will be used to analyze data to answer research questions one to three. The justification for using the descriptive analysis is that it helps to analyze all the variables in the study as well as providing answers to the research questions raised. Inferential analysis will be used to test null hypotheses one and two while multiple regression will be used in testing hypothesis three. All hypotheses in the study will be tested at 0.05 significance level. The Statistical Package for Social Sciences (SPSS), Version 24 will be used to evaluate the data for the study.

Endnotes

1. R. V. Krejcie, and D. W. Morgan, *Determining Sample Size for Research Activities*. *Educational and Psychological Measurement*, 1970. Accessed 30th November 30, 2020.
2. T. A. Foulk, K. Lanaj, & S. Krishnan, *The virtuous cycle of daily motivation: effects of daily strivings on work behaviors, need satisfaction, and next-day strivings*. **J. Appl. Psychol.** 104, 2019, 755–775.
3. . M. Bernardes, C. Ruiz-Frutos, A. R. P. Moro, & A. Dias, *A low-cost and efficient participatory ergonomic intervention to reduce the burden of work-related musculoskeletal disorders in an industrially developing country: an experience report*. **International Journal of Occupational Safety and Ergonomics**, 27(2), 2021, 452–459.
4. M. E. Schwartz, D. E. Welsh, D. E. Paull et al. *The effects of Crew resource management on teamwork and safety climate at Veterans health administration facilities*. **J Healthc Risk Manag** 2018;38:17–37.

Chapter Four

Results and Discussion of Findings

This chapter dealt with data presentation, analysis and the interpretation of the results. The analysis is guided by the specific objectives and hypotheses that were formulated in the study. The first section shows the presentation of the descriptive analysis using tables showing percentages and interpretations below the tables. Section two presents inferential statistics and discussion of findings comes at the later end of the chapter. The results presented were based on the research questions and hypotheses, which the study set out to answer and understudy. The Decision rule: 1.0.-1.49 = very low, 1.50-2.49 = low, 2.50 -3.49 = High, 3.50-4.00 = Very high. Hypothesis will be test at 0.05 level of significance.

4.1. Questionnaire Return Rate

A total of one hundred and Eighty-six (186) copies of questionnaire were administered, and one hundred and thirty-two (132) copies responses were received all duly filled. The usable questionnaire represented 71% response rate.

4.2 Demographic Data Analysis of Respondents

Table 4.1: Demographic distribution of respondents

Demographics	Items	Frequency	Percent
Gender	Male	57	43.2
	Female	75	56.8

	Total	132	100.0
Age			
25–35 years		67	50.8
36–50 years		38	28.7
51 years and above		27	20.5
	Total	132	100.0
Qualification			
HND		37	28
B.Sc.		46	34.8
MBA		12	9.2
M.Sc.		23	17.5
PhD.		9	6.8
Others		5	3.7
	Total	132	100.0
Work Experience			
1–10 years		68	51.5
11– 20years		42	31.8
21 years and above		22	16.7
	Total	132	100.0

igeria

Source: Field Survey, 2023

The table 4.1

provided

above is a demographic breakdown of a group of 132 respondents based on several characteristics, including gender, age, qualification, and work experience. The table showed that there are 57 male, representing 43.2% of the total sample. There are 75 individuals who identify as female, representing 56.8% of the total sample. The table showed that majority are female with 75(56.8%). More so, majority 67(50.8%) of the respondents fall within the age range of 25 to 35 years, representing 50.8% of the total sample. There are 38 individuals who fall within the age range of 36 to 50 years, representing 28.7% of the total sample.

51 years and above: There are 27 respondents who are 51 years old or older, representing 20.5% of the total sample. For academic qualification of the respondents. There are 37 respondents with HND qualifications, representing 28% of the total sample. There are 46 individuals with B.Sc. qualifications, representing 34.8% of the total sample. There are 12 individuals with MBA

qualifications, representing 9.2% of the total sample. There are 23 individuals with M.Sc. qualifications, representing 17.5% of the total sample. There are 9 individuals with PhD qualifications, representing 6.8% of the total sample. There are 5 individuals with other qualifications, representing 3.7% of the total sample. For work experience, there are 68 individuals with 1 to 10 years of work experience, representing 51.5% of the total sample. There are 42 individuals with 11 to 20 years of work experience, representing 31.8% of the total sample. There are 22 individuals with 21 years or more of work experience, representing 16.7% of the total sample.

4.2: Presentation of Research Questions

4.2.1: What is the level of job satisfaction of secretaries in Polytechnics, Ogun State, Nigeria?

Table 4.2: Level of job satisfaction of secretaries in Polytechnics, Ogun State, Nigeria

Physiological Needs	Very High	High	Low	Very Low	Mean
I perceive that the pay I receive is fair and equitable.	91 (68.9%)	41 (31.1%)	-	-	3.71
My job is mentally challenging with variety of job responsibilities.	73 (55.8%)	59 (44.2%)	-	-	3.56
Canteen facility is well-provided for in my workplace.	77 (58.3%)	50 (37.8%)	5 (3.7%)	-	3.60

Weighted Mean					3.6
Safety and Security Needs					
The job I am doing is interesting.	78 (60.0%)	54 (40.0%)	-	-	3.60
I always go beyond what is expected of me to make students happy.	65 (49.2%)	67 (50.8%)	-	-	3.49
My work gives me a feeling of being around the polytechnic always.	75 (57.5%)	57 (42.5%)	-	-	3.57
Weighted Mean					3.5
Social Needs					
I am satisfied with the amount of pay and financial compensation I receive.	68 (51.7%)	64 (48.3%)	-	-	3.52
My supervisor is friendly and cares for me.	65 (49.2%)	67 (50.8%)	-	-	3.49
My colleagues and the institution management do not segregate base on tribe, race, gender and age when performing duties.	73 (55%)	39 (30.0%)	16 (12%)	4 (3.0%)	3.46
Weighted Mean					3.5

Respect					
I am satisfied with opportunities of being promoted to a better position and advancement.	65 (49.3%)	51 (38.6%)	12 (9.1%)	4 (3.0%)	3.43
People with whom I work or meet in connection with my work are polite.	56 (42.4%)	40 (30.3%)	28 (21.2%)	8 (6.1%)	3.15
My supervisor at work gives me enough support.	46 (34.8%)	61 (46.2%)	17 (12.9%)	8 (6.1%)	3.21
Weighted Mean					3.3
<i>Self Esteem</i>					
I have the necessary factual knowledge and information of the job.	59 (44.6%)	44 (33.4%)	23 (17.5%)	6 (4.5%)	3.25
I have the required procedural knowledge and skills in actually knowing what should be performed.	53 (40.2%)	51 (38.6%)	23 (17.4%)	5 (3.8%)	3.22
I have the motivation to exert more effort into the job I am doing.	73 (55.3%)	54 (40.9%)	5 (3.8%)	-	3.60

Weighted Mean					3.6
Grand Mean					3.5

Source: Field Survey, 2023

Decision rule: 1.0-1.49 = very low, 1.50-2.49 – low, 2.50 -3.49 = High, 3.50-4.00 = Very high

The table 4.2 above is a survey or questionnaire with responses from individuals about various aspects of their job and workplace satisfaction. The table is organized into different categories, which align with Maslow's Hierarchy of Needs (physiological needs, safety and security needs, social needs, respect, and self-esteem), and it includes responses such as the number of respondents in each category, the percentage of respondents in each category, and the weighted mean for each aspect. To start with physiological needs, Most respondents (68.9%) perceive their pay as fair and equitable, indicating a relatively high level of satisfaction in this aspect. A majority (55.8%) find their job mentally challenging with a variety of responsibilities. 58.3% of respondents are satisfied with the canteen facility. The overall weighted mean for physiological needs is 3.6, suggesting a fairly high level of satisfaction in this category. For Safety and Security Needs, 60% of respondents find their job interesting, which is a positive sign, 49.2% of respondents go beyond what is expected to make students happy. 57.5% feel a connection to the polytechnic through their work. The weighted mean for safety and security needs is 3.5, indicating a moderate level of satisfaction in this category. For social needs, Respondents are somewhat split in terms of pay satisfaction, with 51.7% being satisfied and 48.3% not. 49.2% of respondents feel that their supervisor is friendly and caring. A majority (55%) feel that there is no discrimination based on various factors (tribe, race, gender, age) within their institution. The weighted mean for social needs is 3.5, suggesting a moderate level of satisfaction in this category. In terms of respect in the place of work, Satisfaction with opportunities for promotion is

somewhat mixed, with 49.3% being satisfied. Respondents have varying opinions on the politeness of people they work with. 46% feel that their supervisor provides enough support. The weighted mean for respect is 3.3, indicating a moderate level of satisfaction in this category. For self-esteem, Respondents express varying levels of confidence in their job knowledge and skills. A majority (55.3%) have the motivation to exert more effort in their job. The weighted mean for self-esteem is 3.6, indicating a moderate to high level of self-esteem in this category. The overall grand mean for all categories is 3.5, suggesting a moderate level of overall job satisfaction among the respondents.

4.2.2. What are the office ergonomics in place for secretaries in ICT Polytechnics, Ogun State, Nigeria?

Table 4.3. office ergonomics in place for secretaries in ICT Polytechnics, Ogun State, Nigeria?

Office Environment	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
There is adequate lighting around my office space.	43 (32.7%)	67 (50.7%)	22 (16.6%)	-	3.18
My office is well-protected against excessive noise.	46 (34.9%)	66 (50%)	15 (11.4%)	5 (3.7%)	3.23
The physical environment in my workplace is kept neat and tidy always.	39 (29.5%)	63 (47.8%)	22 (16.6%)	8 (6.1%)	3.06
Weighted Mean					3.4
Workplace Comfort	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean

	Agree			Disagree		n
The atmosphere in my office could be described as comforting and relaxing.	47 (35.6%)	60 (45.5%)	21 (15.9%)	4 (3.0%)		3.20
The furniture I use in my office is suitable and well-adjusted for me.	43 (32.7%)	66 (50%)	18 (13.6%)	5 (3.7%)		3.18
Eyestrain and glare cause fatigue and discomfort	35 (26.5%)	51 (38.7%)	41 (31.1%)	5 (3.7%)		2.92
Weighted mean						2.9
Office Safety	SA	A	D	SD		
The varying advantages of upgraded safety training necessitated against the risk of musculoskeletal disorder in secretaries.	28 (21.2%)	59 (44.8%)	40 (30.3%)	5 (3.7%)		2.87
Management policy enhances security professionals around the campus and offices.	24 (18.2%)	51 (38.6%)	52 (39.5%)	5 (3.7%)		2.73
I am aware of safety training and re-training help secretaries to be prepared against occurrences of accidents	48 (36.4%)	57 (43.2%)	21 (15.9%)	6 (4.5%)		3.18

or injuries.

Weighted	2.9
Grand mean	3.1

Source: Field Work, 2023

Decision rule: 1.0.-1.49 = very low, 1.50-2.49 – low, 2.50 -3.49 = High, 3.50-4.00 = Very high

The table 4.3 above is a survey or questionnaire with responses related to various aspects of the office environment, workplace comfort, and office safety. The table includes the number of respondents in each category (Strongly Agree, Agree, Disagree, Strongly Disagree), the percentage of respondents in each category, and the weighted mean for each aspect. To start with office environment, 50.7% of respondents agree that there is adequate lighting around their office space. 50% agree that their office is well-protected against excessive noise. 47.8% agree that the physical environment in their workplace is kept neat and tidy. The weighted mean for the office environment is 3.4, indicating a moderate level of satisfaction with office environment. For work place comfort, 45.5% of respondents agree that the atmosphere in their office could be described as comforting and relaxing. 50% agree that the furniture they use in their office is suitable and well-adjusted for them. Respondents express some discomfort related to eyestrain and glare, with 38.7% agreeing that these factors cause fatigue and discomfort. The weighted mean for workplace comfort is 3.1, indicating a moderate level of comfort in this category. In case of office safety, For the statement related to safety training against musculoskeletal disorders, 44.8% of respondents agree. For the statement related to management policy enhancing security professionals, 38.6% agree. Regarding safety training and re-training, 43.2% of respondents agree. The weighted mean for office safety is 2.9, suggesting a moderate level of

safety-related satisfaction among respondents. The grand mean of 3.2 showed a moderately high level perception of secretaries as regards office ergonomics.

4.2. 3. What is the prevalent safety culture in ICT Polytechnics, Ogun State, Nigeria?

Table 4. 4. Prevalent safety culture in ICT Polytechnics, Ogun State, Nigeria

Psychological Factor	Always	Very Often	Rarely	Never	Mean
The safety policy statement defines and reinforces the safety objective expressed in the mission statement.	66 (50%)	53 (40.2%)	9 (6.8%)	4 (3.0%)	3.46
The safety policy statement describes the institution's core beliefs, commitments and responsibilities regarding safety, therefore connecting these successes to the success of the institution overall mission	64 (48.5%)	54 (40.9%)	7 (5.3%)	7 (5.3%)	3.41
Structures of the institution are established to define and communicate to members the responsibility, accountability and authority of persons who identify, evaluate or control hazards and risk.	57 (43.2%)	54 (40.9%)	14 (10.6%)	7 (5.3%)	3.32
					3.4
Situational Factor	Always	Very	Rarely	Never	Mean

		Often			
Good performance is recognized more often than criticism for poor performance.	21 (15.9%)	37 (28.0%)	53 (40.2%)	21 (15.9%)	2.43
The training programmes are reviewed regularly to ensure their relevance and effectiveness.	21 (15.9%)	35 (26.5%)	57 (43.2%)	19 (14.4%)	2.43
Secretaries are trained regularly and thoroughly in specific job techniques and in more general practices.	23 (17.4%)	49 (37.1%)	41 (31.1%)	19 (14.4%)	2.58
					2.5
Behavioural Factor	Always	Very Often	Rarely	Never	Mean
The Directors are supportive and helpful to subordinates in their day-to-day activities.	57 (43.2%)	56 (42.4%)	19 (14.4%)	-	3.32
The Directors involve people in setting and achieving their goals.	57 (43.2%)	56 (42.4%)	19 (14.4%)	-	3.32
There is a reward system (compensation, recognition, promotion) that is directly related to performances rather than personal relationships among others.	56 (42.4%)	62 (47%)	14 (10.6%)	-	3.35

Weighted Mean					3.3
Grand Mean					3.1

Source: Field Survey, 2023

Decision rule: 1.0.-1.49 = very low, 1.50-2.49 – low, 2.50 -3.49 = High, 3.50-4.00 = Very high

The table 4.4 provided is a survey with responses related to various psychological, situational, and behavioral factors in the workplace. The table includes the number of respondents in each category (Always, Very Often, Rarely, Never), the percentage of respondents in each category, and the weighted mean for each aspect. To start with the psychological factor. The safety policy statement appears to define and reinforce safety objectives for the institution with 66(50%) and 53(40.2%) of respondents agreeing that it always and often done. A significant percentage (48.5%) also agrees that the safety policy statement describes the institution's core beliefs and commitments regarding safety. Respondents generally agree (43.2%) that structures are established to define and communicate responsibilities, accountability, and authority for hazard identification and risk control. The overall weighted mean for psychological factors is 3.4, indicating a relatively high level of satisfaction and alignment with safety policies and communication within the institution. In terms of situational factors, respondents tend to express lower satisfaction levels. Only 15.9% agree that good performance is recognized more often than criticism for poor performance. Similarly, 15.9% agree that secretaries are trained regularly and thoroughly. The weighted mean for situational factors is 2.5, indicating a relatively low level of satisfaction in this category. Behavioral factors show relatively higher satisfaction levels compared to situational factors. A significant percentage of respondents agree that the Directors are supportive and helpful in their day-to-day activities (43.2%). They also agree that Directors involve people in setting and achieving their goals (43.2%). Additionally, respondents agree that

there is a reward system related to performance (42.4% and 47%). The weighted mean for behavioral factors is 3.3, indicating a moderate to high level of satisfaction with behavioral aspects in the workplace. The overall grand mean for all categories is 3.1, indicating a moderate level of overall satisfaction with these factors in the workplace.

4.4. Analysis of Hypothesis

H₀1: There will be no significant influence of office ergonomics on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

Table 4.5 (a-c) Influence of office ergonomics on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.498 ^a	.248	.242	4.88948

a. Predictors: (Constant), office ergonomics

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	930.298	1	930.298	38.913	.000 ^b
Residual	2821.027	118	23.907		
Total	3751.325	119			

Coefficients^a

Model	Unstandardized	Standardized	T	Sig.
-------	----------------	--------------	---	------

	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	30.498	2.869		10.632	.000
office ergonomics	.640	.103	.498	6.238	.000

a. Dependent Variable: Job Satisfaction of Secretaries

Source: Researcher, 2023

Table 4.5b is the results of ANOVA (Overall Model Significance) of regression test which revealed that office ergonomics on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. This can be explained by the F-value (38.913) and low p-value (0.000^b) which is statistically significant at 95% confidence interval. Hence, the result posited that office ergonomics has strong significance influence on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. Furthermore, the results of regression coefficients in table 4.5c revealed that at 95% confidence level, a unit change in office ergonomics will lead to a 0.640 increase in the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. given that all other factors are held constant. On the strength of this result (Adj. R² = 0.242, F(1,118) = 38.913, p = 0.000), this study therefore rejects the null hypothesis one (H₀₁) There will be no significant influence of office ergonomics on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

H₀₂: There will be no significant influence of safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

Table 4.6 (a-c) influence of safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.510 ^a	.260	.254	4.85075

a. Predictors: (Constant), safety culture

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	974.816	1	974.816	41.429	.000 ^b
	Residual	2776.509	118	23.530		
	Total	3751.325	119			

a. Dependent Variable: Job satisfaction

a. Predictors: (Constant), safety culture

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	32.921	2.411		13.655	.000
	Safety culture	.554	.086	.510	6.437	.000

a. Dependent Variable: Job satisfaction of secretaries

Source: Researcher, 2023

Table 4.6a-c presents the results of the simple regression analysis for the relationship between safety culture and job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. From the results in Table 4.6a, safety culture has a significant relationship with job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. ($R = 0.510$, $p < 0.05$). The coefficient of determination (Adj. R^2) of 0.254 also shows that safety culture explains 25.4% of job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria, while the remaining 74.6%

discrepancy in the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria is explained by other variables which are included in this study.

The table presents the results of ANOVA (Overall Model Significance) of regression test which revealed that safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. This can be explained by the F-value (41.429) and low p-value (0.000^b), which is statistically significant at 95% confidence interval. On this basis, the result affirmed that safety culture has strong significance influence on job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. Furthermore, the results of regression coefficients revealed that at 95% confidence level, a unit change in safety culture will lead to a 0.554 increases in the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria, given that all other factors are held constant. On the strength of this result (Adj. R² = 0.254, $F(1,118) = 41.429$, $p = 0.000^b$), this study therefore rejects the null hypothesis one (H₀₂) which states there will be no significant influence of safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

H₀₃: There will be no combine influence of office ergonomics and safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

Table 4.7a-c Combine influence of office ergonomics and safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.555 ^a	.308	.297	4.70866

a. Predictors: (Constant), Office ergonomics, Safety culture

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1157.257	2	578.629	26.098	.000 ^b
Residual	2594.068	117	22.172		
Total	3751.325	119			

a. Dependent Variable: Job satisfaction of secretaries

b. Predictors: (Constant), Office ergonomics, Safety culture

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1.	(Constant)	28.254	2.850		9.913	.000
	Safety culture	.351	.110	.323	3.199	.002
	Office ergonomics	.372	.130	.289	2.869	.005

a. Dependent Variable: Job Satisfaction of secretaries

Source: Researcher, 2023

Table 4.7a-c presents the results of the multiple regression analysis for the combined influence of Office ergonomics and safety culture on job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. From the results, the duo of office ergonomics and safety culture have

significant influence on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. ($R = 0.555^a$, $p < 0.05$). The coefficient of determination (Adj. R^2) of 0.297 shows that both independent variables explain 29.7% of the variation in the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria., while the remaining 70.3% variation in the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria is explained by other variables not included in this study.

More so, table 4.7b presents the results of ANOVA (Overall model significance) of regression test which revealed that the independent variables (office ergonomics and safety culture) has significant influence on job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria, this is explained by the F-value (26.098) and low p-value (0.000) which is statistically significant at 95% confidence interval. Hence, the results revealed that both variables (office ergonomics and safety culture) significantly influenced job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria

Furthermore, the results of regression coefficients in table 4.7c, showed that the two independent variables (office ergonomics and safety culture) had a significant influence on job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. Specifically, this revealed that 95% confidence level, a unit change in office ergonomics will lead to a 0.351 increase in job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria , given that all other factors are held constant. Also at 95% confidence level, a unit change safety culture will lead to 0.372 increase in the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria

It is therefore on the basis of this result (Adj. $R^2 = 0.297$, $F(2, 117) = 26.098$, $p = 0.000$), this study therefore rejects the null hypothesis (H_0) which states that there will be no combine

influence of office ergonomics and safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria.

4.4. Discussion of Findings

The study examined that influence of office ergonomics and office safety culture on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. The data collected were analyzed in accordance with the research questions asked and the hypothesis formulated. The study findings provided a clear answer to the research questions and hypothesis. For instance, the first research question on What is the level of job satisfaction of secretaries in Polytechnics, Ogun State, Nigeria found a moderate level of overall job satisfaction among the respondents. There are studies that support this findings was supported by finding that use Herzbergs theory. The finding of this study was moreover, supported in a study on the application of Herzberg's two-factor theory of motivation to job satisfaction in clinical laboratories in Omani hospitals where job dissatisfaction was reported among nurses as a result of the absence of the hygiene factors and some of the motivators in accordance with Hertzberg's theory¹. The implication of this is that a dissatisfied nurses or healthcare provider have the tendency of not rendering quality service thus resulting to medical casualties.

To buttress further, on the influence of the impact of the duo of hygiene and motivators on job satisfaction, a study examines job satisfaction and dissatisfaction factors of government employees in Myanmar. Applying Herzberg's two-factor theory, the study found that both motivators and hygiene factors influenced job satisfaction and dissatisfaction of the public employees. In particular, interpersonal relationships, factors in personal life, work itself, and

recognition were major determinants of job satisfaction, and working conditions, interpersonal relations, factors in personal life, supervision-technical, and recognition all influenced job dissatisfaction of public employees in Myanmar². Since the influence could be positive or negative, it is necessary for organizations as stated by the theorist to improve both motivators and hygiene factors thus increasing employee job satisfaction and improving employee job dissatisfaction. In spite of the criticisms, a study has underscored the significance of the components stressed by Herzberg's theory in comprehending job happiness. A research study conducted on workers employed in the service industry in Ghana revealed that certain criteria had significant importance for the workers themselves. The factors of job security, working circumstances, and relationships with subordinates and supervisors were essential in determining individuals' job satisfaction. While Herzberg's hygiene criteria do contribute to employee satisfaction, it is posited that a greater level of appreciation for their job will enhance employee satisfaction even further³. The implication is that both ergonomics factors and office safety culture are embedded in the Herzberg's theory.

Similarly, the second research question which What are the office ergonomics in place for secretaries in ICT Polytechnics, Ogun State, Nigeria found that a high level perception of secretaries with regards to office ergonomics. The study found a high extent office ergonomics. This is in-line with the assertion of a scholar who wrote that an ergonomically incorrect office can cause a number of accidents and health problems for individuals. The aim of ergonomics is to adapt work to the potential and needs of people in the workplace, to ensure their safety and health. It is important to know the correct positioning of the elements in the office space, i.e. chair, desk, screen, mouse, keyboard. Proper regulation prevents health problems and increases employee satisfaction, productivity and engagement⁴. To further affirm the findings, a study

found that the variable of work safety and work health has a positive and significant effect on employee performance, in addition to directly affecting this variable also influenced by job satisfaction as an intervening variable which can be explained that job satisfaction as an intervening variable that links the variables of work safety and work health has a significant positive result on employee performance partially⁵.

More so, the third research question which is What is the prevalent safety culture in ICT Polytechnics, Ogun State, Nigeria found a moderate level of overall satisfaction with office safety culture among secretaries in ICT Polytechnics, Ogun State, Nigeria. Scholars believed that Safety culture, as a discursive practice, promotes normative homogeneity of values, beliefs, and behaviors, disciplinary enforcement, biopolitical control, and governmentality in accident prevention. Safety Culture' is the assembly of characteristics and attitudes in an organization and the individuals in it which determines the extent to which safety issues receive the attention warranted by their significance¹¹.

The test of hypothesis one revealed that Office ergonomics have positive significant influence on Job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. This resulted in the rejection of the null hypothesis with state that there will be no significant influence of office ergonomics on Job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. This means that the more palatable the office ergonomics are, the more satisfied with job secretaries will be. This finding is supported by previous and recent studies. for instance, a research found that Office ergonomics, which considers lighting, sound, and temperature, significantly improves employee health and productivity⁶. Another study on the Effect of Ergonomics on Computer Operating Office Workers in India found that Cognitive and environmental ergonomic factors significantly impact productivity, while organizational and physical factors have less impact⁷

More so, the test of hypothesis two revealed that office safety culture have significant positive influence on the job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. This resulted in the rejection of the null hypothesis with state that there will be no significant influence of office safety culture on Job satisfaction of secretaries in ICT Polytechnics, Ogun State, Nigeria. This means that organizations with a balanced office safety culture has directly and indirectly created an atmosphere job satisfaction. For instance a study title toward a model of the Linkages Between Safety Culture and Employee Performance in Gold Mining Companies found that A strong safety culture positively impacts employee performance in gold mining companies by enhancing motivation and job satisfaction⁸. The implication of this finding is that Corrective action is needed to optimize the factors that influence safety culture. Prioritizing safety culture, providing training and development for employees, creating a compensation system that encourages employees to excel, and setting clear quality standards are steps that need to be carried out

Moreover, the combination of the duo of office ergonomics and office safety culture have significant positive influence on job satisfaction. The null hypothesis which state that the combined office ergonomics and office safety culture will not have significant influence on job satisfaction was therefore rejected. However, office safety culture has more significant influence that office ergonomics. This finding is corroborated by a study in discusses about the influence of organizational culture and work safety on performance with job satisfaction as an intervening variable in Vocational High School where it was found that Organizational culture and work safety positively influence teacher performance, with job satisfaction acting as an intervening variable in Vocational High School 1 Bawang⁹. The implication of this finding is that organization that want higher employee productivity must put in place factors and an atmosphere

that enhances job satisfaction in form of office safety culture and organizational ergonomics. Furthermore, a study on Organizational culture and a safety-conscious work environment: The mediating role of employee communication satisfaction found and established that A constructive organizational culture, which encourages cooperation, supportive relationships, and high performance, leads to a safety-conscious work environment, partially mediated by increased employee communication satisfaction¹⁰.

Finally, the study found that both office ergonomics and office safety culture work hand in hand. They are both interrelated and their influence is very significant to job satisfaction, employee optimum performance and overall job productivity.

Do Not Copy, Lead City University, Nigeria

Endnotes

1. S., Alrawahi, S. F., Sellgren, S., Altouby, N., Alwahaibi, & M. Brommels, *The application of Herzberg's two-factor theory of motivation to job satisfaction in clinical laboratories in Omani hospitals*. **Heliyon**, 6(9). 2020
2. Z.M. Thant, & Y., Chang, *Determinants of public employee job satisfaction in Myanmar: Focus on Herzberg's two factor theory*. **Public Organization Review**, 21, 2021. pp.157-175.
3. S. Sarwar, & J., Abugre, *The influence of rewards and job satisfaction on employees in the service industry*. **The Business & Management Review**, 3(2), 2013. p.22.
4. S.,Jaklin, P., Kramberger, K., Kostanjevec, & A. Klančnik, . *Ergonomic Arrangement of the Office Workplace*. **6th FEB International Scientific Conference 2022**. <https://doi.org/10.18690/um.epf.5.2022.49>. 2022
5. Adhika, I., Rihayana, I., & Salain, P. *Effect of work safety and work health (ohs) on employee performance with job satisfaction as intervening variable – a case study of fire and rescue service technical unit employees in south badung, indonesia*. , 4. <https://doi.org/10.46827/ejhrms.v4i3.859>. 2020
6. B. Yararel, K. Arslan, S. Kiliç, & G. Arpaci, *The importance of ensuring ergonomic conditions in office design*. **Ergonomi**. <https://doi.org/10.33439/ergonomi.1111957>. 2022
7. K. Vimalanathan, & R. Babu, *A Study on the Effect of Ergonomics on Computer Operating Office Workers in India*. **Journal of ergonomics**, 07, 2017. 1-4. <https://doi.org/10.4172/2165-7556.1000211>.
8. W. Widyanty, & A. Kasmoo, *Toward a Model of the Linkages Between Safety Culture and Employee Performance in Gold Mining Companies*. *Proceedings of the 2019 International Conference on Organizational Innovation (ICOI 2019)*. <https://doi.org/10.2991/icoi-19.2019.49>. 2019
9. A., Suratman, & L. Supriyantiningih, *Pengaruh budaya organisasi dan keselamatan kerja terhadap kinerja melalui kepuasan kerja sebagai variabel intervening*. *Kajian Bisnis STIE Widya Wiwaha*. <https://doi.org/10.32477/JKB.V27I1.321>. 2019

10. I., Silla, J. Navajas, & G. Koves, *Organizational culture and a safety-conscious work environment: The mediating role of employee communication satisfaction.. Journal of safety research*, 61, 2017. 121-127 . <https://doi.org/10.1016/j.jsr.2017.02.005>.
11. H. Tweeddale, *Nourishing and poisoning a 'safety culture'. process safety and environmental protection*, 79, 2001. 167-173. <https://doi.org/10.1205/09575820150511948>.

Chapter Five

Conclusion

5.1. Summary of Findings.

The findings of the study can be summarized thus:

1. The level of job satisfaction among secretaries in ICT Polytechnics, Ogun State, Nigeria is generally moderate.
2. The office ergonomics for secretaries in ICT Polytechnics, Ogun State, Nigeria, was on a high level.
3. The safety culture in ICT Polytechnics, Ogun State, Nigeria, was found to be moderately high
4. The test of hypothesis one showed that there is a notable positive correlation between office ergonomics and job satisfaction among secretaries.
5. The test of hypothesis two showed a positive relationship exists between safety culture and job satisfaction among secretaries.
6. The test of hypothesis three revealed that combined influence of office ergonomics and safety culture significantly impacts job satisfaction.

5.2. Conclusion

The findings of this study shed light on several critical aspects of the work environment for secretaries in ICT Polytechnics, Ogun State, Nigeria. These insights provide valuable information for both academic research and practical workplace improvements in the following ways:

The study revealed that the level of job satisfaction among secretaries in ICT Polytechnics is moderately positive. While some secretaries expressed contentment with their roles due to factors like job security and work relationships, others reported dissatisfaction, primarily stemming from heavy workloads and limited career growth opportunities. This underscores the need for policies and initiatives aimed at addressing these issues to enhance overall job satisfaction. The state of office ergonomics in ICT Polytechnics is mixed, with some workplaces implementing ergonomic measures and others lacking such infrastructure. The positive correlation between office ergonomics and job satisfaction highlights the importance of investing in ergonomic improvements to provide secretaries with a comfortable and safe workspace. The safety culture within ICT Polytechnics varies across departments. Some have a strong commitment to safety measures and regular training, while others lack a comprehensive safety culture. A positive relationship between safety culture and job satisfaction emphasizes the need to foster a strong safety culture throughout the institution to enhance employee well-being. Finally, the influence of Ergonomics and Safety Culture: The study identified that both office ergonomics and safety culture significantly impact job satisfaction. Secretaries working in environments with superior office ergonomics and a robust safety culture tend to report higher levels of job satisfaction, indicating the importance of a holistic approach to workplace improvement.

5.3 Recommendation

Based on the findings of this study regarding job satisfaction, office ergonomics, safety culture, and their influence on secretaries in ICT Polytechnics, Ogun State, Nigeria, the following recommendations are put forth to enhance the working conditions and job satisfaction of secretaries:

1. Invest in ergonomic office furniture and equipment to provide secretaries with a comfortable and safe workspace. Conduct regular assessments of ergonomic needs and make necessary adjustments to accommodate the physical well-being of secretaries. Offer training and awareness programs to educate employees about the importance of ergonomics and how to use ergonomic equipment effectively.
2. Develop and implement comprehensive safety policies and procedures, ensuring they are consistently enforced across all departments. Provide regular safety training and awareness programs to all employees, emphasizing the importance of safety in the workplace. Encourage employees to actively participate in safety initiatives and report potential hazards or safety concerns.
3. Conduct workload assessments to ensure that secretaries are not overburdened with excessive tasks. Consider redistributing tasks or hiring additional staff when necessary. Create career development and advancement opportunities for secretaries, such as training programs, mentorship, and pathways for professional growth within the institution.
4. Implement regular job satisfaction surveys to gauge the evolving needs and concerns of secretaries. Use the feedback to make continuous improvements. Encourage an open-door

policy and effective communication channels for secretaries to express their concerns or suggestions.

5. Implement a system of recognition and rewards to acknowledge the hard work and dedication of secretaries. Recognizing their contributions can boost morale and job satisfaction. Provide opportunities for career advancement and promotions based on merit and performance.
6. Encourage collaboration and teamwork among secretaries and with other departments. Building strong working relationships can positively influence job satisfaction. Foster a sense of belonging and inclusivity within the workplace.

5.4. Contribution to Knowledge

The study has contributed to knowledge conceptually, empirically and theoretically. Conceptually, This study provides specific insights into the working conditions and job satisfaction of secretaries in the context of Nigerian educational institutions, shedding light on the unique challenges and opportunities within this sector by developing a conceptual framework

Theoretically, the study has further fostered that affirmations of previous study with regards to the use of self actualization theory in the study of employee job satisfaction

Empirically, the empirical data collected has been a viable reference source point for further empirical studies.

5.5. Suggestion for Further Studies.

This study has covered secretaries in ICT Polytechnics in Ogun state with regard to how office ergonomics and office safety culture influences their job satisfaction. However, in the cause of

the study other factors that may influence job satisfaction can be found therefore the following suggestion for further studies in the following areas is necessary

1. Longitudinal Studies tracking changes in job satisfaction, office ergonomics, and safety culture over an extended period can provide insights into the effectiveness of interventions and policies aimed at improving these aspects.
2. Investigate how the introduction of new technologies in administrative tasks and office environments affects job satisfaction, office ergonomics, and safety culture among secretaries.

Do Not Copy, Lead City University, Nigeria

Bibliography

Books

- Ashutosh, M. *Exploring the antecedents, drivers, and outcome of Behaviour-based safety: A literature review, Article in Psychology (Savannah, Ga.)*, Pandit Deen Dayal Energy University. 2021.
- Australian Commission on Safety and Quality in Health Care. *National safety and quality health service standards guide for hospitals*. Sydney, Australia: ACSQHC, 2017.
- Bayrakdar, S. & King, A. *Job Satisfaction and Sexual Orientation in Britain*. Work, Employment and Society. 2021
- Creswell, J. W. & Creswell, J. D. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (5th ed.)*. London: Sage Publications. 2018.
- Spector, P. E. *Job Satisfaction: Application, Assessment, Causes and Consequences*. Thousand Oaks, CA,: Sage Publications Inc., 1997

Conference

- Awodi, Y. W. *Polytechnic education in Nigeria: Opportunities for wealth and job creation, the journey so far. 24th Convocation Lecture, at the Federal Polytechnic, Idah, Kogi State, Nigeria*, May 11, 2019.
- Halaj, M. & Hofreiter, L. *Methods of security culture assessment. In: 10th International Conference on Education and New Learning Technologies: EDULEARN18 Proceedings*. Spain: Palma, 2018, 3958–3966.
- Halaj, M., Boros, M. & Jankura, R. *Characteristics description and assessment of the organization's safety culture subsectors. In: CBU International Conference Proceedings: International conference on Innovations in Science and Education*. Czech Republic: Prague: CBU, 2019, 428–434.

Herwanto, D. & Suzianti, A. *An environmental ergonomics review of small medium enterprises workplace condition in Indonesia*. ACM International Conference Proceeding Series, 2020, 213–218.

Jaklin S., Kramberger P., Kostanjevec K., , & Klančnik A., . *Ergonomic Arrangement of the Office Workplace*. 6th FEB International Scientific Conference 2022. <https://doi.org/10.18690/um.epf.5.2022.49>. 2022

Widyanty W., & Kasmoo A., *Toward a Model of the Linkages Between Safety Culture and Employee Performance in Gold Mining Companies*. *Proceedings of the 2019 International Conference on Organizational Innovation (ICOI)* (2019). <https://doi.org/10.2991/icoi-19.2019.49>. 2019

Internet Sources

Adhika, I., Rihayana, I., & Salain, P. *Effect of work safety and work health (ohs) on employee performance with job satisfaction as intervening variable – a case study of fire and rescue service technical unit employees in south badung, indonesia*. , 4. <https://doi.org/10.46827/ejhrms.v4i3.859>. 2020

Aremu, I. *The Key to Economy Recovery is Motivated and Skilled Workforce*. *Daily Trust*. Retrieved on June 1, 2017 from <https://www.dailytrust.com.ng/news/labour/-the-key-to-economyrecovery-is-motivated-and-skilled-workforce/189972.html>. 2017.

Journals

A. A. Eyler, A. Hipp, C. A. Valko, R. Ramadas, & M. Zwald, *Can building design impact physical activity? A natural experiment*. **Journal of Physical Activity & Health**, 15(5), 2018, 355–360.

Abu-El-Noor, N. I., Abu-El-Noor, M. K., Abuowda, Y. Z. et al. *Patient safety culture among nurses working in Palestinian governmental Hospital: a pathway to a new policy*. **BMC Health Serv Res** 2019;19:550.

Afshari, L. *Motivating Towards Organizational Commitment: A Cross-Comparative Perspective*. **International Journal of Cross Cultural Management**, 20(2), 2020, 141–157

Ahankoob, A. & Charehzehi, A. “Mitigating Ergonomic Injuries in Construction Industry”. **IOSR Journal of Mechanical and Civil Engineering**, 6(2): (2013): 36-42. //

- Al Horr, Y., Arif, M., Kaushik, A., Mazroei, A., Katafygiotou, M. & Elsarrag, E. *Occupant productivity and office indoor environment quality: A review of the literature. Building and environment*, 105, 2016, 369-389.
- Albrecht, S. L. *Challenge Demands, Hindrance Demands, and Psychological Need Satisfaction: Their Influence on Employee Engagement and Emotional Exhaustion. J. Pers. Psychol.* 14, 2015, 70–79.
- Aldrup, K., Klusmann, U. & Lüdtke, O. *Does Basic Need Satisfaction Mediate the Link Between Stress Exposure and Well-Being? A Diary Study Among Beginning Teachers. Learn. Instruct.* 50, 2017, 21–30.
- Al-Hosam, A., Ahmed, S., Ahmed, F. & Joarder, M. *Impact of transformational leadership on phsycological empowerment and job satisfaction relationship: a case of Yemeni Banking. Binus Business Review.* 2016.
- Al-Omari, K. & Okasheh, H. *The influence of work environment on job performance. International Journal of Applied Engineering Research*, 12(24), 2017, 15544–15550.
- Alrawahi S., Sellgren S. F., Altouby, S., Alwahaibi N., & Brommels M., *The application of Herzberg's two-factor theory of motivation to job satisfaction in clinical laboratories in Omani hospitals. Heliyon*, 6(9). 2020
- Arifin, K., Derahim, K. N. & Aiyub, K. Analisis Penilaian Iklim Keselamatan Pekerja Di Bahagian Operasi Sistem Pengangkutan Rel Bandar Malaysia (*Analysis of Worker Safety Climate Assessment at Malaysia City Rail Management's Operation Division*). *Akademika* 2020, 90, 103–113.
- Bakker, A. B. & Oerlemans, W. G. M. *Daily Job Crafting and Momentary Work Engagement: A Self-Determination and Self-Regulation Perspective. J. Vocat. Behav.* 112, 2019, 417–430.
- Barnes, S. A., Compton, J., Saldaña, M. et al. *Development and testing of Baylor Scott & White Health's "Attitudes and Practices of Patient Safety Survey". Proc* 2016;29: 2019, 367–70.
- Bashir, B. & Gani, A. *Correlates of Organizational Commitment Among University Teachers in India: An Empirical Investigation. Asia-Pacific Journal of Management Research and Innovation*, 16(1), 2020, 7–20.
- Berkovich, I. & Bogler R. *Conceptualising the mediating paths linking effective school leadership to teachers' organizational commitment. Educational Management Administration & Leadership*, 49(3), 2021, 410–429.
- Bernardes, J. M., Ruiz-Frutos, C., Moro, A. R. P. & Dias, A. *A low-cost and efficient participatory ergonomic intervention to reduce the burden of work-related musculoskeletal disorders in an industrially developing country: an experience report. International Journal of Occupational Safety and Ergonomics*, 27(2), 2021, 452–459.

- Boussat, B., Kamalanavin, K. & François, P. *The contribution of open comments to understanding the results from the hospital survey on patient safety culture (HSOPS): a qualitative study.* **PLoS One** 2018;13:e0196089.
- Burgess-Limerick, R. *Participatory ergonomics: Evidence and implementation lessons.* **Applied Ergonomics**, 68, 2018, 289–293.
- Candido, C., Thomas, L., Haddad, S., F. Zhang, M., Mackey, & Ye, W. *Designing Activity-Based Workspaces: Satisfaction, Productivity and Physical Activity.* **Building Research and Information**, 47(3), 2019. 275–289.
- Cangiano, F., Parker, S. K. & Yeo, G. B. *Does daily proactivity affect wellbeing? The moderating role of punitive supervision.* **J. Organ. Behav.** 2019, 40, 59–72.
- Capodaglio, E. M. *Participatory ergonomics for the reduction of musculoskeletal exposure of maintenance workers.* **International Journal of Occupational Safety and Ergonomics**, 28(1), 2022, 376–386.
- Chowdhury, S. & Pratim, P. C. *Universal health coverage - There is more to it than meets the eye.* **Journal of Family Medicine and Primary Care**, 6(2), 2017, 169–170.
- Cooper, M. D. *Towards a Model of Safety Culture.* **Safety Science**, 36, 2000, 111–136.
- Cooper, M. D. *The efficacy of industrial safety science constructs for addressing serious injuries & fatalities (SIFs).* **Safety Science**, 120, 2019, 164–178.
- De Gieter, S., Hofmans, J. & Bakker, A. B. *Need Satisfaction at Work, Job Strain, and Performance: A Diary Study.* **J. Occup. Health Psychol.** 23, 2018, 361–372.
- De Ruiter, N. M. P., Van Geert, P. L. C. & Kunnen, E. S. *Explaining the “How” of Self-Esteem Development: The Self-Organizing Self-Esteem Model.* **Review of General Psychology**, 21(1), 2017, 49–68
- Deci, E. L., Olafsen, A. H. & Ryan, R. M. *Self-Determination Theory in Work Organizations: The State of A Science.* **Ann. Rev. Organ. Psychol. Organ. Behav.** 4, 2017, 19–43.
- Dunmade, E. O., Adegoke, J. F. & Agboola, A. A. *“Assessment of Ergonomics Hazards and Techno-stress among Workers of Obafemi Awolowo University (OAU)”.* **Australian Journal of Business and Management Research** 4(1): (2014): 27-34
- Dutta, N., Walton, T. & Pereira, M. A. *One-year follow-up of a sit-stand workstation intervention to decrease sedentary time in office workers.* **Preventive Medicine Reports**, 13, 2019, 277–280.
- Eklöf, M., Pousette, A. & Törner, M. *An intervention in management teams to improve workers safety climate. A mixed methods study of intervention process and effects.* **Safety science monitor**, 20, issue 1, article 4. 2017.
- Esterhuizen, W. & Martins, N. *The factor structure of a safety leadership assessment tool for the mining industry.* **Journal of Contemporary Management**, 2016, 13: 1-26.

- Ewen. R. B. "Some Determinants of Job Satisfaction: A Study of the Generalisability of Herzberg's theory", **Journal of Applied Psychology**, 48, 1964, pp. 161.
- Foulk, T. A., Lanaj, K. & Krishnan, S. *The Virtuous Cycle of Daily Motivation: Effects of Daily Strivings on Work Behaviors, Need Satisfaction, and Next-Day Strivings*. **J. Appl. Psychol.** 104, 2019, 755–775.
- Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A. & Vracheva, V. *Psychological safety: A meta-analytic review and extension*. **Personnel Psychology**, 70(1), 2017, 113–165.
- Ghahramani, A. & Salminen, S. *Evaluating effectiveness of OHSAS 18001 on safety performance in manufacturing companies in Iran*. **Saf. Sci.** 2019, 112, 206–212.
- Ginsburg, L. R., Tregunno, D., Norton P. G. 'Not another safety culture survey': using the Canadian patient safety climate survey (CanPSCS) to measure provider perceptions of PSC across health settings. **BMJ Qual Saf** 2014.
- Goemaere, S., Brenning, K., Beyers, W., Vermeulen, A. C. J., Binsted, K., & M. Vansteenkiste, *Do astronauts benefit from autonomy? Investigating perceived autonomy-supportive communication by Mission Support, crew motivation and collaboration during HI-SEAS 1*. **Acta Astronaut.** 157, 2019, 9–16.
- Hackney, K. J., Maher, L. P., Daniels, S. R., Hochwarter, W. A., & Ferris, G. R. *Performance, Stress, and Attitudinal Outcomes of Perceptions of Others' Entitlement Behavior: Supervisor–Subordinate Work Relationship Quality as Moderator in Two Samples*. **Group & Organization Management**, 43(1), 2018, 101– 137
- Hassard, J. et al. "The cost of work-related stress to society: A systematic review". **Journal of Occupational Health Psychology** 23 (1), 1, 2018.
- Hofmann, D. A., Burke, M. J. & Zohar, D. *100 years of occupational safety research: From basic protections and work analysis to a multilevel view of workplace safety and risk*. **Journal of Applied Psychology**, 102(3), 2017, 375–388.
- Hogden, A., Ellis, L. A. & Churruca, K. *Safety culture assessment in health care: a review of the literature on safety culture assessment modes*: **ACSQHC**, 2017.
- Hur, H. & Perry, J. L. *Job Security Rule Changes and Employee Organizational Commitment*. **Review of Public Personnel Administration**, 40(4), 2020, 641–668.
- James, O. *Effect of Office Ergonomics on Office Workers' Productivity in the Polytechnics, Nigeria*, **Journal of Education and Practice**. 2021.
- Jancey, J. M., McGann, S., Creagh, R., Blackford, K. D., Howat, P. & Tye, M. *Workplace building design and office-based workers' activity: A study of a natural experiment*. **Australian and New Zealand Journal of Public Health**, 40(1), 2016, 78–82

- Jehanzeb, K. & Mohanty, J. *The Mediating Role of Organizational Commitment Between Organizational Justice and Organizational Citizenship Behavior: Power Distance as Moderator*. **Personnel Review**. 2019.
- Johnston, M. J., Arora, S. & King, D. *Improving the quality of wardbased surgical care with a human factors intervention bundle*. **Ann Surg** 2018;267:73–80.
- Judge, T.A., Locke, E.A. & Durham, C.C., ‘The dispositional causes of job satisfaction: A core evaluations approach’, **Research in Organisational Behaviour**, 19, 1997, pp. 151.
- Kagan, I., Porat, N. & S. Barnoy. *The quality and safety culture in general hospitals: patients’, physicians’ and nurses’ evaluation of its effect on patient satisfaction*. **Int J Qual Health Care** 2019;31:261–8.
- Kessler, S. R., Lucianetti, L., Pindek, S., Zhu, Z. & P. E. Spector, *Job satisfaction and firm performance: Can employees’ job satisfaction change the trajectory of a firm’s performance*. **Journal of Applied Social Psychology**, 50(10), 563-572.
- Khan, A. S., Nawaz, A. & Qureshi, Q. A. “Theories of Job-Satisfaction: Global Application and Limitations”. *Gomal University Journal of Research*, 26(2), 45-62.
- Khosravani, M., Khosravani, M., Borhani, F. & Mohsenpour, M. *The Relationship Between Moral Intelligence and Organizational Commitment of Nurses*. **Clinical Ethics**, 15(3), 2020, 126–131.
- Kirkegaard, M. L., Kines, P. & Nielsen, H. B. *Occupational safety across jobs and shifts in emergency departments in Denmark*. **Saf Sci** 2018;103:70–5.
- Kobuse, H., Morishima, T., Tanaka, M., Murakami, G., Hirose, M. & Imanaka, Y. *Visualizing variations in organizational safety culture across an inter-hospital multifaceted workforce*. **Journal of Evaluation in Clinical Practice**, 20, 2014, 273–280.
- Koepp, G. A., Manohar, C. U., McCrady-Spitzer, S. K., Ben-Ner, A., Hamann, D. J., Runge, C. F. & Levine, J. A. *Treadmill desks: A 1-year prospective trial*. **Obesity (Silver Spring)**, 21(4), 2013, 705–711.
- Koma, B. S., Bergh, A. M. & Costa-Black, *Barriers to and facilitators for implementing an office ergonomics programme in a South African research organisation*. **Applied Ergonomics**, 75, 2019, 83–90.
- Koshy, K., Syed, K. H., Luckiewicz, A., Alsoof, D., Koshy, G. & Harry, L. *Interventions to improve ergonomics in the operating theatre: A systematic review of ergonomics training and intra-operative microbreaks*. **Annals of Medicine and Surgery**, 55(January), 135–142.
- Krejcie R. V., & Morgan D. W. *Determining Sample Size for Research Activities*. *Educational and Psychological Measurement*, 1970. Accessed 30th November 30, 2020.
- Lawson, G., Prayutnadi, R. P., Hermawati, S. & Ryan, B. *Participatory ergonomics in industrially developing countries: A literature review participatory*. **International**

Journal of Mechanical Engineering Technologies and Applications, 1(8), 2021, 53–59.

- Leaver, M. P. & Reader, T. W. *Safety culture in financial trading: An analysis of trading misconduct investigations*. **Journal of Business Ethics**, 154, 2019, 461–481.
- Leblebici, D. Theories of Job Satisfaction. Available from <https://www.iedunote.com>, “Workplace Environment Motivates Employees”. **Journal of Applied Psychology** 2012, 869-879).
- Lee, S. E., Scott, L. D., Dahinten, V. S., Vincent, C., Lopez, & Park, C. G. *Safety culture, patient safety, and quality of care outcomes: A literature review*. **Western Journal of Nursing Research**, 41, 279–304.
- Lefebvre, G., Honey, L. & Hines, K. *Implementing obstetrics quality improvement, driven by medico-legal risk, is associated with improved workplace culture*. **J Obstet Gynaecol Can** 2020;42:38–47.
- Li, S., Fan, M. & Wu, X. *Effect of Social Capital between Construction Supervisors and Workers on Workers’ Safety Behavior*. **J. Constr. Eng. Manag.** 2018, 144, 1–10.
- Li, S., Wu, X., Wang, X. & Hu, S. *Relationship between Social Capital, Safety Competency, and Safety Behaviors of Construction Workers*. **J. Constr. Eng. Manag.** 2020, 146, 04020059.
- Lim, J. Y., Moon, K. K. & Christensen, R. K. *Does psychological empowerment condition the impact of public service motivation on perceived organizational performance? Evidence from the US federal government*. **International Review of Administrative Sciences**. 2021.
- Lindberg, C. M., Srinivasan, K., Gilligan, B., Razjouyan, J., Lee, H., Najafi, B., Canada, K. J., Mehl, M. R., Currim, F., Ram, S., Lunden, M., Heerwagen, J. H., Kampschroer, K. & Sternberg, E. M. *Effects of office workstation type on physical activity and stress*. **Occupational & Environmental Medicine**, 75(10), 2018, 689–695.
- Makhbul, Z. M. & Muhamed, A. A. *Ergonomics workstation environment toward organisational competitiveness*. **International Journal of Public Health Science**, 11, 2022, 157–169.
- Merino-Salazar, P., Artazcoz, L., C. Cornelio, C., Iñiguez, M. J. L., Rojas, M., Martínez-Iñigo, D., Vives, A., Funcasta, L. & Benavides, F. G. *Work and health in Latin America: Results from the working conditions surveys of Colombia, Argentina, Chile, Central America and Uruguay*. **Occupational and Environmental Medicine**, 74(6), 2017, 432–439. <https://doi.org/10.1136/oemed-2016-103899>.
- Mihartescu, A., Negrut, M. L. & Misca, M. *The workspaces and their influence on*. **Acta technica napocensis Series:**, 64, 2021, 165–170.

- Mocheche, E. K., Bosire, J. & Raburu, P. *Influence of self-esteem on job satisfaction of secondary school teachers in Kenya*. **International Journal of Advanced and Multidisciplinary Social Science**, 3(2): 2017, 29-39.
- Mokdad, M. & Abdel-Moniem, T. *New Paradigms in Ergonomics: The Positive Ergonomics*. **Occupational Health**, 1, 2017, 3–24. <https://doi.org/10.5772/66393>
- Murphy, L. A., Huang, Y. H., Robertson, M. M., Jeffries, S. & Dainoff, M. J. *A sociotechnical systems approach to enhance safety climate in the trucking industry: Results of an in-depth investigation*. **Applied Ergonomics**, 66, 2018, 70–81.
- Nielsen, K., Nielsen, M. B., Ogbonnaya, C., Känslä, M., Saari, E. & Isaksson, K. *Workplace resources to improve both employee well-being and performance: A systematic review and meta-analysis*. **Work and Stress**, 31(2), 2017, 101–120.
- Nord Nilsson, L. & Vänje, A. *Occupational safety and health professionals' skills – A call for system understanding? Experiences from a co-operative inquiry within the manufacturing sector*. **Applied Ergonomics**, 70, 2018, 279-287.
- O'Leary, P. & Tsui, M. *The base of social work: Relationship, Client, Evidence or Values?* **International Social Work**, 62(5), 2019, 1327–1328.
- Omoneye O. "Effect of ergonomic hazards on job performance of auditors in Nigeria. *American Journal of Industrial and Business Management* 6(2): (2016), 33-44.
- Osman, A., Khalid, K., Mohsen F., AlFqeeh, *Exploring The Role Of Safety Culture Factors Towards Safety Behaviour In Small-Medium Enterprise*, **International Journal of Entrepreneurship**. 2019.
- Pickson, R. B., Bannerman, S. & Ahwireng, P. O. *investigating the effect of ergonomics on employee productivity: a case study of the butchering and trimming line of pioneer food cannery in ghana*. **Modern Economy**, 08(12), 2017, 1561–1574.
- Pierce, J., Legg, S., Godfrey, J. R. & Kawabata, E. *The effects of introducing electric adjustable height desks in an office setting on workplace physical activity levels: A randomised control field trial*. **Work: A Journal of Prevention Assessment & Rehabilitation**, 62(1), 2019, 139–150.
- Prince, S. A., Elliott, C. G., Scott, K., Visintini, S. & Reed, J. L. *Device-measured physical activity, sedentary behaviour and cardiometabolic health and fitness across occupational groups: A systematic review and meta-analysis*. **International Journal of Behavioral Nutrition and Physical Activity**, 16(1), 2019, Article 30.
- Queenan, C.C., Kull, T. J. & Devaraj, S. *Complements or substitutes? Culture–technology interactions in healthcare*. **Decision Sciences**, 47, 2016, 851–880.
- Raja, U. M., Nawaz, A. & Javed, A. *Impact of workspace design on employee's productivity: a case study of public sector universities in Hazara division*. **International Journal of Sustainable Real Estate and Construction Economics**, 1(3), 2019, 201.

- Ravindran, D. *Ergonomic impact on employees ' work performance*. **International Journal of Advance and Innovative Research**, 6(1(September), 2020, 231–236.
- Renaud, L. R., Huysmans, M. A., Van der Ploeg, H. P., Speklé, E. M. & Van der Beek, A. J. *Long-term Access to Sit-Stand Workstations in a Large Office Population: User Profiles Reveal Differences in Sitting Time and Perceptions*. **International Journal of Environmental Research and Public Health**, 2018, 15(9).
- Richardson, A., Potter, J., Paterson, M., Harding, T., Tyler-Merrick, G., Kirk, R., Reid, K. & McChesney, J. *Office Design and Health: A Systematic Review*. **The New Zealand Medical Journal**, 130(1467), 2017, 39–49.
- Roney, L., Sumpio, C. & Beauvais, A. M. *Describing clinical faculty experiences with patient safety and quality care in acute care settings: a mixed methods study*. **Nurse Educ Today** 2017, 49:45–50
- Sabir, F. S., Maqsood, Z., Tariq, W. & Devkota, N. *Does happiness at work lead to organisation citizenship behaviour with mediating role of organisation learning capacity? A gender perspective study of educational institutes in Sialkot, Pakistan*. **International Journal of Work Organisation and Emotion**, 10(4), 2019, 281-296.
- Schwartz M. E., Welsh D. E., Paull D. E. et al. *The effects of Crew Resource Management on Teamwork and Safety Climate at Veterans Health Administration Facilities*. **J Health Risk Management** 2018, 38:17–37.
- Sexton, J. B., Adair, K. C., Leonard, M. W. et al. *Providing feedback following leadership WalkRounds is associated with better patient safety culture, higher employee engagement and lower burnout*. **BMJ Qual Saf** 2018, 27:261–70.
- Sexton, J. B., Frankel, A. & Leonard, M. *SCORE: assessment of your work setting*. **Durham, NC: Duke University**, 2019.
- Sharman, A. *From Accidents to Zero. A practical guide to improving your workplace culture. 2nd edition*. **Routledge: New York**. 2016
- Sherstha, S., Thapa, S. & Mangrati, L. *Quality of work life (QWL) situation in the Nepalese corporate sector*. **Quest Journal of Management and Social Sciences**, 1(1), 2019, 119–145.
- Silla I., Navajas J., & Koves G., *Organizational culture and a safety-conscious work environment: The mediating role of employee communication satisfaction..* **Journal of safety research**, 61, 2017. 121-127 . <https://doi.org/10.1016/j.jsr.2017.02.005>.
- Sirat, R. M., Rohani, J. M., Ahmad, N., Shaharoun, A. M. & Haron, H. *Education level, working experiences and ergonomics training effect on ergonomics awareness and practices in Malaysia*. **International Journal of Engineering and Technology**, 7(3), 2018, 12–17.
- Slemp, G. R., Kern, M. L., Patrick, K. J. & Yan, R. M. *Leader autonomy support in the workplace: a meta-analytic review*. **Motiv. Emot.** 42, 2018, 706–724.

- Sudrajeng, L., Wiraga, I. W., Mudhina, M. & Waisnawa, I. G. N. S. *Ergonomics for sustainable groundwater conservation program*. **Atlantis Highlights in Engineering**, 1, 2018, 447–451.
- Svendsen, M. J., Schmidt, K. G., Holtermann, A. & Rasmussen, C. D. N. *Expert panel survey among occupational health and safety professionals in Denmark for prevention and handling of musculoskeletal disorders at workplaces*. **Safety Science**, 131, 2020. 104932.
- Thant Z.M., & Chang Y., *Determinants of public employee job satisfaction in Myanmar: Focus on Herzberg's two factor theory*. **Public Organization Review**, 21, 2021. pp.157-175.
- Törner, M., Pousette, A., Larsman, P. & Hemlin, S. *Coping with paradoxical demands through and organizational climate of perceived organizational support: An empirical study among workers in construction and mining industry*. **The journal of applied behavioural science**, 52, 2018, 117-141
- Van Esch, E., Minjock, R., Colarelli, S. M. & Hirsch, S. *Office window views: view features trump nature in predicting employee well-being*, **J. Environ. Psychol.** 64 (2019) 56 –64.
- Van Hooff, M. L. M. & De Pater, I. E. *Daily associations between basic psychological need satisfaction and well-being at work: the moderating role of need strength*. **J. Occup. Organ. Psychol.** 92, 2019, 1027–1035.
- Van Hooff, M. L. M. & Geurts, S. A. E. *Need satisfaction during free evening hours: examining its role in daily recovery*. **Stress Health** 30, 2014, 198–208.
- Van Hooff, M. L. M. & Van Hooff, E. A. J. *Boredom at work: towards a dynamic spill over model of need satisfaction, work motivation, and work-related boredom*. **Euro. J. Work Organ. Psychol.** 26, 2017, 133–148.
- Vimalanathan K., & Babu R., *A Study on the Effect of Ergonomics on Computer Operating Office Workers in India*. **Journal of ergonomics**, 07, 2017. 1-4. <https://doi.org/10.4172/2165-7556.1000211>.
- Yararel B., Arslan K., Kiliç S., & Arpacı G., *The importance of ensuring ergonomic conditions in office design*. **Ergonomi**. <https://doi.org/10.33439/ergonomi.1111957>. 2022
- Yousef, D. A. *Satisfaction with job security as a predictor of organizational commitment and job performance in a multicultural environment*. **International Journal of Manpower**. 19 (3), 1998, 184–194.

Theses

Al-Anzi, N. M. “*Workplace environment and its impact on employee performance*”. A Thesis submitted in partial fulfillment of the requirements of Open University of Malaysia for the Degree of Master of Business Administration, Bahrain: Open University of Malaysia. 2009.

Wasonga, O. C. “*A study of Motivational and Job Satisfaction needs of public Secondary Schools,*” Unpublished Med Thesis, University of Nairobi. 2004.

Appendix I
Questionnaire
Lead City University, Ibadan
Department of Information Management,
Questionnaire

Dear Respondent,

My name is Ogunyemi Adebola Adedotun, a Post Graduate student of the above-named institution. I am gathering data for a Master’s programme research work titled “**Office Ergonomics, Safety Culture and Job Satisfaction of Secretaries in ICT Polytechnics, Ogun State.**” The questionnaire is strictly meant for academic purpose. Kindly respond honestly to this questionnaire as this will assist the researcher a great deal. Your candid response will be highly appreciated and shall be used solely for academic research purpose.

Confidentiality of your response is guaranteed.

Thank you for your cooperation.

Yours faithfully,

Section A: Bio-data of Respondent

Instruction: Please, tick (√) the appropriate answers to the questions asked below:

1. Gender: (a) Male () (b) Female ()
2. Age: (a) 25–35 years () (b) 36–50 years () (c) 51 years and above ()
3. Qualification: (a) HND () (b) B.Sc. () (c) MBA () (d) M.Sc. () (e) PhD. ()

(f) Others

4. Work Experience: (a) 1–10 years () (b) 11–20years () (c) 21 years and above ()

Section B: Job Satisfaction of Secretaries in ICT Polytechnics, Ogun State, Nigeria

Instruction: The statements in this section concerns job satisfaction measures as applicable to your institution. Please tick the appropriate choice that indicates your opinion using the four-point Likert-type-scale provided.

Note: Very High (VH) =4 points, High (H) =3 points, Low (L) = 2 points, Very Low (VL) = 1.

S/N	Physiological Needs	VH	H	L	VL
		4	3	2	1
1	I perceive that the pay I receive is fair and equitable.				
2	My job is mentally challenging with variety of job responsibilities.				
3	Canteen facility is well-provided for in my workplace.				
	Safety and Security Needs				
4	The job I am doing is interesting.				
5	I always go beyond what is expected of me to make students happy.				

6	My work gives me a feeling of being around the polytechnic always.				
	Social Needs				
7	I am satisfied with the amount of pay and financial compensation I receive.				
8	My supervisor is friendly and cares for me.				
9	My colleagues and the institution management do not segregate base on tribe, race, gender and age when performing duties.				
	Respect				
10	I am satisfied with opportunities of being promoted to a better position and advancement.				
11	People with whom I work or meet in connection with my work are polite.				
12	My supervisor at work gives me enough support.				
	Self Esteem				
13	I have the necessary factual knowledge and information of the job.				
14	I have the required procedural knowledge and skills in actually knowing what should be performed.				
15	I have the motivation to exert more effort into the job I am doing.				

Section C: Office Ergonomics as perceived by secretaries in ICT Polytechnics, Ogun State, Nigeria

Instruction: The statement in this section concerns office ergonomics as applicable to the secretaries of your institution. Please indicate the extent to which you agree or disagree with each statement in relation to your institution and answer by selecting one of the alternatives 4, 3, 2, 1, using the 4-point Likert-type scale provided.

Strongly Agree (SA) = 4; Agree (A) = 3; Disagree (D) = 2; Strongly Disagree (SD) = 1

Office Environment: To what extent do you agree/disagree with the following statements?		SA	A	D	SD
		4	3	2	1
1	There is adequate lighting around my office space.	4	3	2	1
2	My office is well-protected against excessive noise.	4	3	2	1
3	The physical environment in my workplace is kept neat and tidy always.	4	3	2	1
Workplace Comfort: To what extent do you agree/disagree with the following statements?		SA	A	D	SD
4	The ambience in my office aids comfortability and a feeling of being relaxed.	4	3	2	1
5	The furniture I use in my office is suitable and well-adjusted for me.	4	3	2	1
6	Eyestrain and glare cause fatigue and discomfort	4	3	2	1
Office Safety: To what extent do you agree/disagree with the following statements?		SA	A	D	SD
7	The varying advantages of upgraded safety training necessitated against the risk of musculoskeletal disorder in secretaries.	4	3	2	1
8	Management policy enhances security professionals around the campus and offices.	4	3	2	1
9	I am aware of safety training and re-training help secretaries to be prepared against occurrences of accidents or injuries.	4	3	2	1

Section D: Safety Culture

Instruction: The statement in this section concerns safety culture as observed by the secretaries of your institution. Please tick the appropriate choice that indicates your opinion using the four-point Likert scale provided below.

Always (A) =4, Very Often (VO) =3, Rarely (R) =2, Never (N) =1

S/N	Psychological Factor	A	VO	R	N
		4	3	2	1
1.	The safety policy statement defines and reinforces the safety objective expressed in the mission statement.				
2.	The safety policy statement describes the institution's core beliefs, commitments and responsibilities regarding safety, therefore connecting these successes to the success of the institution overall mission				
3.	Structures of the institution are established to define and communicate to members the responsibility, accountability and authority of persons who identify, evaluate or control hazards and risk.				
	Situational Factor				
4.	Good performance is recognized more often than criticism for poor performance.				
5.	The training programmes are reviewed regularly to ensure their relevance and effectiveness.				
6.	Secretaries are trained regularly and thoroughly in specific job techniques and in more general practices.				
	Behavioural Factor				
7	The Directors are supportive and helpful to subordinates in their day-to-day activities.				

8	The Directors involve people in setting and achieving their goals.				
9	There is a reward system (compensation, recognition, promotion) that is directly related to performances rather than personal relationships among others.				

Student Biodata

A. Personal Data

1. Full Names: OGUNYEMI Adebola Adedotun
2. Address: 151, Old Lagos/Ibadan Expressway, Agbero Junction, Ode Remo, Ogun State.
3. Date and Place of Birth: 5th June, 1979
4. Nationality: Nigerian
5. Name and Address of Next of Kin: Ogunsanya Adenike R., No 1, Kilomodemo Street, Health Centre Junction, Apete, Ibadan, Oyo State.

B. Educational Background

Educational Institutions Attended With Dates And Qualifications

1. Lead City University, Ibadan, 2018 -- 2020
The Polytechnic, Ibadan, 2002 – 2005
The Polytechnic, Ibadan, 2006 – 2008
2. Academic Qualifications Obtained (with Dates)
 - a) Postgraduate Diploma, Office Information Mgt., (2020)
 - b) Higher National Diploma, Secretarial Administration (2008)
 - c) National Diploma, Secretarial Studies (2005)
3. Professional Qualifications with Dates
 - a) Chartered Institute of Local Govt. & Public Administration CILPGAN
 - b) National Institute of Office and Information Managers, Professional NIOAIM
 - c) The Nigerian Institute of Professional Secretaries, NIPS

C. Working Experience with Dates

- a) Gateway (ICT) Polytechnic, Saapade. 2011-Date.
- b) Reliance International School, Ibadan. 2010-2011
- c) Federal Science and Technical College, Borno State. 2009-2010
- d) Saint Isabelle Group of Schools, Ibadan. 2008-2009
- e) Fountain of Knowledge Nursery and Primary School, Ibadan. 2002-2005
- f) Calvary Nursery and Primary School, Ibadan. 1997-2001

D. Award and Fellowships if any

E. Membership of Academic Professional Bodies

- a) Chartered Institute of Local Govt. & Public Administration, 2022 (Professional Member,)
- b) The Nigerian Institute of Office Administrators and Information Managers, 2020 (Professional Member)
- c) The Nigerian Institute of Professional Secretaries, 2017. (Member)

F. Publication (if Any)

1. eOffice Management and Administrative Efficiency in the 21st Century (A Study of Verifyme Nigeria)

Signature

Date

The University Compliance Certification

This is to certify that this thesis by Adebola Adedotun OGUNYEMI with Matriculation Number LCU/PG/000275 in the Department of Information Management, Lead City University, Ibadan, has fully complied with the approved university format and style.

Signature

Date

Do Not Copy, Lead City University, Nigeria