

CONTRIBUTION OF JOB DESIGN AND ERGONOMICS CONSIDERATIONS ON EMPLOYEE PERFORMANCE IN SERVICE SECTORS IN TANZANIA: A QUALITATIVE STUDY

Abstract

Aim: This study aimed to focus on discussing involvement of several techniques that used in job design which are job rotation, job enlargement, job enrichment, employee's empowerment, and autonomy toward performance of manufacturing sectors as well focusing on discussing job design and ergonomic effect on employee performances in Tanzania

Methodology: The study adopted investigative philosophy (Antipositivism) that advocate qualitative data methods; the cross-sectional survey design was used to measure variables relationship through reviewed of published literatures as well as asking collect information from key informants. The study focus was company's operating on services sector that located in Dar es Salaam and Mbeya Cities. 20 past literatures were reviewed together with 9 key informant employees from services offered companies in study areas. The study adopted content analysis for analyzing data collected using interview technique integrated with Preferred Reporting for Systematic Reviews and Meta-Analysis extension for Scoping Review (PRISMA-Scr) to analyses previous literatures.

Findings: From the study results, there were significant relationship between job design techniques and employee motivation that lead to performance of services sector companies. This means there necessary to construct job design that promote employee performances. Also, in adaptation of job design the organization should consider improvement of workplace environment and office design overall to facilitate safety and health workplace relationship. Recommendations: The study recommendations to the companies are to reconsidered human factors when developing job structure to ensure physical, cognitive ergonomics, and organizational ergonomics are incorporated within job framework and reduce mental and physical problem related to working environment.

Keywords: *Job design, Ergonomics, Employees performance, Service sector*

Introduction

Employee performance have become critically aspect for enhancement of companies performance within competitive market, the changes of business environment that are contributed due to globalization which affected working structure of many companies, the increase in competition influenced business to reform management

approach and incorporated tools that promote employees motivation and engagement [9] The management have exposed to new challenges of employee motivation and performance which are considered as spears in competitive market where human capital are considered bloodline of organization business, to align the business goals and employees demand

are critical and challenged task to managers and leader who utilized different tools, skills, and strategies that enable formulating integrative management framework which align employees performances and organization performances [27]

Job Design concept

Job design are considered as framework that define work content and procedures that direct understanding nature of work and individual quality to execute those procedure, also underlining the activities used to perform those task and timeframe needed to meet target for those task with aim to increase productivity and improve quality of work environment [25] the job design highlighted job features and how can be performed by structuring roles and task to individual or group of employees [10]. There five major components within job design that aimed in specifying job constituent to employees which are job specialization, job expansion, motivations factors, team design, and psychological factors.

Job specialization. This considered as process whereby employees within services sectors or services-based organization acquire or develop skills tailored to specific task necessary in achieving business objectives, the specialization are performed

through development of program that aimed to excel skills and knowledge in selected task [25]. The specialization are considered key factors in boosting employees performances in services industry which results in increasing effectively and efficiency execution of assigned task and lead to productivities for example in services sector employee can specialize into assembly lines, machinery operation, or processing of raw input while in services based sector employees can specialize in marketing, sales, accounting sector and others [6].

Job expansion. One of common components of job design are expansion that involve diversifying task performed within organization through assigning variety of task to employee across similar working environment which add more responsibilities [29] this influence job design as company evaluate related task that can be integrated to employee responsibilities in order to increase productivities for instance within services industry employees can operate machines and also assigned to handle warehouse or store keeper to be tasked with selling responsibilities and in services industry finance officers in bank can be assigned to perform bank taller task (Stevenson, 2012).

Motivations factors. The engagement of employee within work environment are key aspect to the company as it improves productivity and influence goal achievement, the job design focused on enabling integration of several working environment factors that influence employee morale to raise and being motivated with aim to increase productivity [15].

Team design. The objectives of services companies to increase productivity and gain competitive advantages as well as increase customer orientation factors, for those goals being achieved most or organization restructured their job design framework basis to non-routine design that based team [25] the job designed to empower self-directed team which assign more responsibilities and task to group with mutual objectives and autonomy to make decision based on assigned task.

Psychological factors. As one of components within job design are consideration of psychological requirement of employee within working environment, due to attitude and behavior differences most of employee have distinct characteristics that influence on decision making. Thus the job design should focus on employee's individual factors contribution which aim to promote skills variation which

enable employee to exploit individual skills and talent possessed also to define nature of job that allow employees to understand job identity from initial stage to final stages, also the job design should include autonomy factors that allow creativity and independents with framework that define job significant and feedback structure explained contribution to the performance of individual [25].

Historically the background of job design can be traced to early 20th century during the rises of mass production where specialization was necessary for speed production to cover the market demand[28], thus influenced Winslow, Frederick Taylor to introduce scientific management model of human capital known as Taylorism model in 1911 that define task relocation and required attribute for performed those task such as ability, knowledge, and skills [13], Taylor introduced systematically examine requirement of task assigned to employees with focus that ensure those task motivate, provide satisfaction, and maximize performances of human resources within organization. In order to ensure employee are motivated and maximize their performances there several techniques that used in job design which are job rotation,

job enlargement, job enrichment, employees' empowerment, and autonomy.

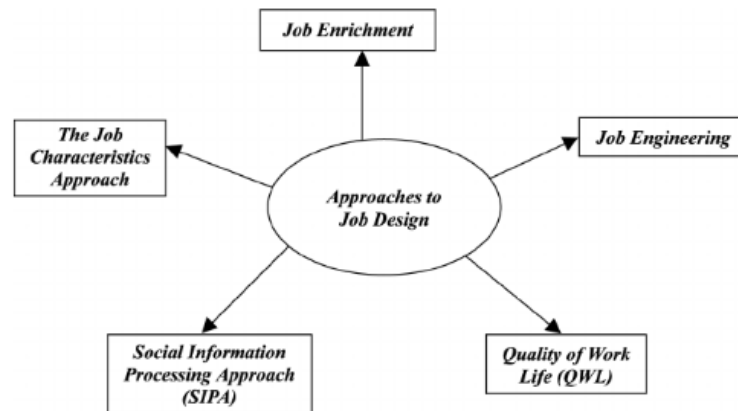


Fig 1: Approaches to job design

Sources: [12]

Jobrotation. This are predetermined structure that allow employees to shift between different task and roles within same ecosystem in organization with purpose to improve skills set and knowledge [12], the job rotation involve systematic movement of employee from one job specialization to another within similar department in to control monotonous and boredom due to performing similar task repeatedly[26]. Through rotation it enables organization to prepare skills profiles of employee and design job accordingly to showcased skills that best fit to the individual.

Job enlargement. This are distribution of variety of task to individual within similar working ecosystem through accumulating task and responsibilities within same job level[13], the job enlargement are reforming

task to incorporate additional responsibilities or different responsibilities within same level with aim to attract employee engagement toward company objective [10]. The enlargement can either be vertically whereby the employee are involved in arrangement of task added or can be horizontal enlargement whereby job environment adding more task in present responsibilities [7].

Job enrichment. This are job design that integrate more challenging responsibilities to the existing one with the purpose to improve performance of employees [13], the enrichment involves assigning task that are not in same job level as the employee are tasked to perform jot that were performed by his or her superior without supervision as they scheduling own monitoring system that

coordinate performance [7]. The job enrichment mainly goals are to improve work autonomy to employee in order to increase motivation and in return results to organization performances [1].

Employee's empowerment. This involve reallocation of responsibilities and task to the lowest job level to boost working morale of being included in s]

=[][significant task to those employees holding lower positions [25] the empowerment **increases** performances as employee take responsibilities toward achieving business objectives with personal interest to be part of success. This are more likely based on psychological perception of employee as involvement increase ownership perception which influence satisfaction as additional responsibilities and task create meaningful satisfaction as involvement present valued contribution to the organization also it **increases** responsibility and accountabilities as well as knowledge [13].

And autonomy. The job design that **promotes** freedom within working environment whereby they can have independents business decision that define structure of perfuming assigned task, the job autonomy described as degree of freedom offered to

employees to decide on working schedule that aligned with company objectives [1].

Ergonomic Concept

The wide idea of ergonomic are studying the cross-sectional interaction between human resources, working environment and machines within organization [14], the concept of **ergonomics is to** ensure workplace environment are tailored toward employees needs with objective to control discomfort in workplace and increase productivity. The concept of incorporating human factors into job design within workplace by consideration of physical factors, cognitive factors that based on work stress, workload, and human environment and machine interactions, also the ergonomic considered organizations factors that focused on teamwork, communication and telework condition [25].

The ergonomic are consideration of designing working places to ensure it reduce discomfort within workplaces which involve arrangement of workstation to enable reduction of musculoskeletal disorder (MSDS) and promote productivity within organization. The concept of ergonomics **is to** promote safety and health workplace to employee [11]. Different literature discussed on the impact of ergonomics to **employees'** performances within workplaces

The study conducted by [4] that aimed to measure the effect of Job design and ergonomic on Employee Performance in Indian automobiles, the results show that there statistical relationship between job design and ergonomics toward employee performances. The study concluded that there necessary to include ergonomic to the job design. Study of [20] who aimed to analyze the ergonomic impact on employee's work performance and concluded that comfortable furniture setup, workplace temperature, amount of light, less distraction, movement and occasional changes have positive influence of increasing employee productivity within organization. Study conducted by [11] to assess the impact of office ergonomics on business performance, the outcome showed

that ergonomic deficiencies was contribution to poor performances of organization due to outdated furniture and poor arrangement, also **low-quality** decoration was lowering employee morale as lack of ergonomics factors was affected working health and safety. The study recommended restructured of office facilities to improve human factors within work station and set up.

The ergonomic should be considered integration of workstation in holistic mode that allow function and movement to interact easily with other activities from furniture, machines and working tools such as computers to working environment. The following figure indicate the integration among employees, work station, and responsibilities that promote health working environment and lead to productivities.

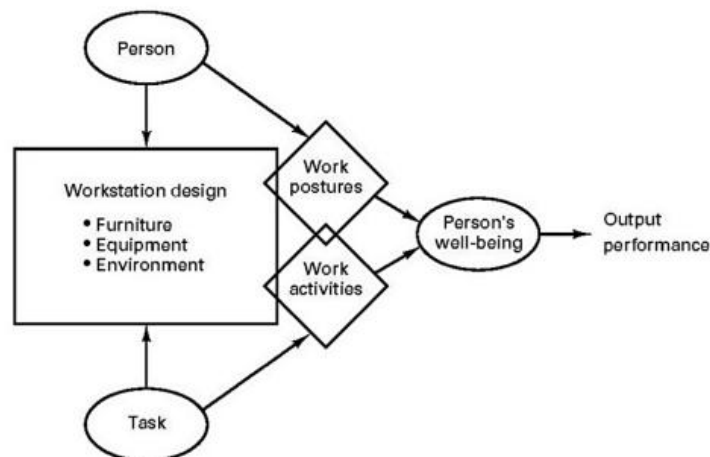


Fig 2: Person's well-being

Sources: [8]

Problem Statement

Among many challenges faced organization in developing countries such as Tanzania are low employee motivation and performances that lead to poor productivity of organization and demoralization of labor forces that affect quality of workplaces and limit organization to explore provided opportunities, most common causes of those challenges are negative environment factors presented in workplace. Among adopted tools to control those challenges are job design that focused on improvement of employee satisfaction and motivation to facilitate boosting of engagement in workplaces and increase productivity. Also, majority of workplace set up failed to incorporate human demand in return affect productivities and health quality of employee as most of employees are affected with MSDS and other discomfort [11].

The study of [4] that conducted on effect of job design and ergonomics on employee performances in Indian automotive sector, the quantitative study showed that **their significant positive statistical relationship between job** design and ergonomic to organization performance. This indicated that for organization to improve their performance they should consider adaptation

of job design and ergonomics for improvement of performances. The Resource based approach explained the significant of utilizing production resources as primary competitive advantages within marketplace, thus means raw material, human capital, and machinery while vital human capital focused on using experience, knowledge, skills, and job competency to improve organization competitive advantages [13]. But most of companies within Tanzania failed to benefits from human resources due to nature of most services companies and services-based companies are focused on cost efficiency and invest on low quality labor forces and results to low performances [4].

Due to low bodies of knowledge that conducted toward assessment of influence and effect of job design impact within Tanzania this study aimed to focus on discussing involvement of several techniques that used in job design which are job rotation, job enlargement, job enrichment, employee's empowerment, and autonomy toward performance of services sectors as well focusing on discussing job design and ergonomic effect on employee performances in Tanzania.

Methodology

This study adopted investigative philosophy which is Antipositivism that advocate qualitative data methods, the selection of this philosophy are influenced by the nature of the study which based on analysis of investigative theoretical mode of interpretivist rather than scientific model. The study used cross-sectional survey design which enable measuring variables through reviewed of published literatures as well as asking collect information from individual and examine the relationship between variables without relying on control data group [22].

The study focus was company's operating on services sector are inclusive in the study, the sample selected for the study was companies that located in Dar es Salaam and Mbeya Cities following their popularity and abundant of operating companies. The sample was selected using simple randomly probability sampling technique. 20 past literatures were reviewed together with 9 key informant employees from services offered companies located in Dar es Salam and Mbeya cities.

The study adopted content analysis for analyzing data collected using interview technique integrated with Preferred Reporting for Systematic Reviews and

Meta-Analysis extension for Scoping Review (PRISMA-Scr) to analyses previous literatures. The study's eligibility criteria were determined through an evidence assessment approach, emphasizing peer reviewed articles, study design, and date which the study conducted. Inclusion criteria prioritized studies providing clear and sufficient information relevant to the research questions.

Results And Discussions

Job design and Employee Performances

From the gathered information from primary sources and secondary sources that focused to measure the impact of job design tools to the services sectors within Tanzania. The job design impact was measured through adopted tools which are job rotation, job enlargement, job enrichment, employee's empowerment, and autonomy.

Impact of job rotation; The study measure the impact of job rotations within services companies by conduct interview with managers in Azania group companies, the study found out that job rotation was influencing employee's motivation which results to the increase in productivities within Azania Company, for example there rotation of employees from warehouse employees to perform sales responsibilities

to enable adding skills and knowledge on the market demand also accountant was assigned procurement task to enable them familiarizing the cost of input. The manager was commented the following,

“Since the purpose of employing labor forces are to ensure everyone within organization contributed to the core objective of the organization, we conduct regular job rotation to ensure all employees are developing necessary skills set that can be utilized by the organization”

These results were supported by the study of (Gobena, 2020) who assessed the effect of job design on employee performance and found out that Job rotations have been employed for motivating employee Dashen Brewery to increase performances of company.

Job enlargement; In assessing the impact of job expansion within services sectors the study found out that job enlargement has contributed to exploration of employee’s skills efficiently to the related task added to the initial responsibilities, the job enlargement contributed to skills development that enabled effectively execution of assigned task and lead to increase organization performances. The study assessed impact of job enlargement in Chemi&Cotex industries located in Dar es

Salam and found out they implemented job enlargement tools for example employees that operate in chemistry lab for mixing chemicals provided additional task of performing sales responsibilities and improve their communication skills sets and improve employees’ values. As one of employee in Chemi&Cotex industries commented the following,

“Professionally I am laboratory technician but through job enlargement it enables me to develop new skills sets as sometimes I perform sales function which enable improve my communication and negotiation skill and develop my carriers as those skills add values”

Also,Chemi&Cotex industries manager said the following,

“Our companies have been improved performance wise due to job enlargement since the employees are motivated to perform their function since their add new skills through those task expansion”

The results were supported by the study of (Etim, 2016) who assessed the effect of job design and staff training on employee performance in Nigeria and found out that job enlargement have positive influence of companies’ performances.

Job enrichment; The study was aimed to understand the influence of job design tools

through measuring impact of job enrichment to ALAF Company located in Dares Salaam, the study found out that ALAF reallocate additional task to its employees especial in middle level management for example the middle managers are assigned task to handle all business units that responsible for agency recruitment. This action **has** contributed positively to the performance of ALAF in construction industry as they have influenced performance of employees to handle challenged task. One of employee from middle level commented the following, *“Handling department are one of hardest task since all responsibilities are fallen on your shoulders, in any scenario you do not need to fail meet target since it will affect entire business operation and this encourage you to give the best to ensure those tasks are achieved which results to performance of company”*

This was supported by the literature study of [1] who assess the effect of job redesign on employee’s performance and found out that task delegation **has** influenced the performance of services industry.

Employee’s empowerment; The study found out that in Azania Company Job empowerment have positive relationship to employee engagement which results to increase of productivity, the company

offered more responsibilities to entry- and low-level employees for example low level technicians assigned to perform inspection of machines in processing plants, also market team assigned to handle corporate based sales. The study found out that empowerment have psychological based influence on employee performances as commented by head of operation in Azania Group,

“When you need to boost performance of employees make him or her feels part of the team, this will empower employee as they will increase intensity to ensure they add contribution to the overall performance of organization”

This was supported empirically by the study of (Munyiri, 2014) job design and employee performance of insurance company in Kenya who found out that job design tools have positive influence on company performance as empowerment improved engagement to workplace.

Job autonomy. The study found out the autonomy in workplaces within Tanzania services sector are less practices due to the fact that it affects performances of company. The data analysis from Chemi&Cotex industries indicated their negative relationship between job autonomy and

company performances, the operation manager added to the comment by said,

“In services industry, we follow structured and predetermined framework that need to synchronize throughout, offering autonomy would affect operation”

The results were argued against empirical evidence from [15] who conducted the study on determining when and how job design have influenced work motivation, which argued that job autonomy have contribution to personal traits of employees which results to increase engagement and focus on assigned task since all decision and execution are under own influence.

The review documents indicated that job simplification have positive and negative impact to the performance of employees in services company, some of the research argued that job simplification have contributed to employee performance as it increases skills due to from repetitive performance of less complex task and also since it simplified it means less health risk to the employees which increase motivation and results to productivity and performance. This outcome was supported by the study of [30]

But also the job simplification was considered to have negative influence on employee performance as it create risk of

monotony in workplaces due to reducing responsibilities as well as it affect employee satisfaction to low work which create psychological conflict of not being trusted by the company which affect performances overall due to low interaction with company responsibilities, as described on article written by (Gurchiek, 2007).

Ergonomics designand Employee Performance in Services Sector

The human capital is considered as heartbeat of any organization in business activities since their tools and spears that can detect the direction of the company performances, thus in last few decades most of business managers have shifted their attention to ensure health relationship between employees and working environment in order to increase engagement and productivities within workplaces [20]. There two main driving factors that are considered as constraints to the employee productivities which are based on managerial factors that contributed by poor job design, strictly management model, low communication and interaction, and others that promote interaction within business areas between employees and company, second factors are working environment design which include premises arrangement, office design, workplace furniture setting, and others

related to workplace premises [19]. One of the key concepts that are considered in improving work environment situation to the employees are uses of ergonomic.

Ergonomics defined as scientific aspect that describe relationship between human being working environment, the study concerned with understanding the interaction between human elements and job design adopted by company [24]. Ergonomics tools for job design that incorporate human factors in workplaces by consider capabilities and physical limitation of employees, the aim are to maximize relationship and interaction between workplace and employee which boost efficiency and performance [14]. Ergonomics have three categories which are main focus on designing job in services sectors, those are physical ergonomics, cognitive ergonomics, and organizational ergonomics.

Physical ergonomics are concerned with human bodies which included in execution of physical activities, the concept is to align internal factors and external factor to match with human bodies capacity into performing assigned responsibilities [24]. Cognitive ergonomics are concerned with human factors that deals with mental reasoning and processing like human perception toward exposed environment and other factors that

are interactive within workplace, while organizational ergonomics are interaction between human factors and organizational structure that form relationship within work area which include aspect like organization policies, management structure, work design, communication model, and other factors [24].

Working environment are covered several factors which include furniture arrangement, equipment, interior design and lighting amount, destruction level, atmosphere temperature and other elements that included workspaces.

There numbers of literature conducted in relations to ergonomics and other working environment contribution toward employee performance. Study of [19] investigating the effect of ergonomics on employee productivity in butchering and trimming line of pioneer food cannery in Ghana. The study used sample size of 134 employees, the results showed that ergonomic factors that defined by PFC was having positive effect on employee performances. Another study of [4] that aimed to measure the effect of Job design and ergonomic on Employee Performance, the results show that job design and ergonomics have positive relationship toward employee performances. Study of [20] who analyze the ergonomic

impact on employee's work performance and concluded that comfortable furniture setup, workplace temperature, amount of light, less distraction, movement and occasional changes have positive influence of increasing employee productivity within organization. also [12] to assess the impact of office ergonomics on business performance, the outcome showed that ergonomic deficiencies were contribution to poor performances of organization due to outdated furniture and poor arrangement, also low-quality decoration was lowering employee morale as lack of ergonomics factors was affected working health and safety. Also [21] on the study to assess the

impact of physical work environment toward employee performance at P.T Bank Indonesia Manado regional office, the study found out that their significant relationship between employee performance and physical work environment.

From above literature that discussed ergonomics effect on employee's performances, the study constructed framework that show relationship of workplace arrangement and productivity of employees which lead to performances. The framework was constricted through adaptation of empirical work conducted by [21] as presented below.

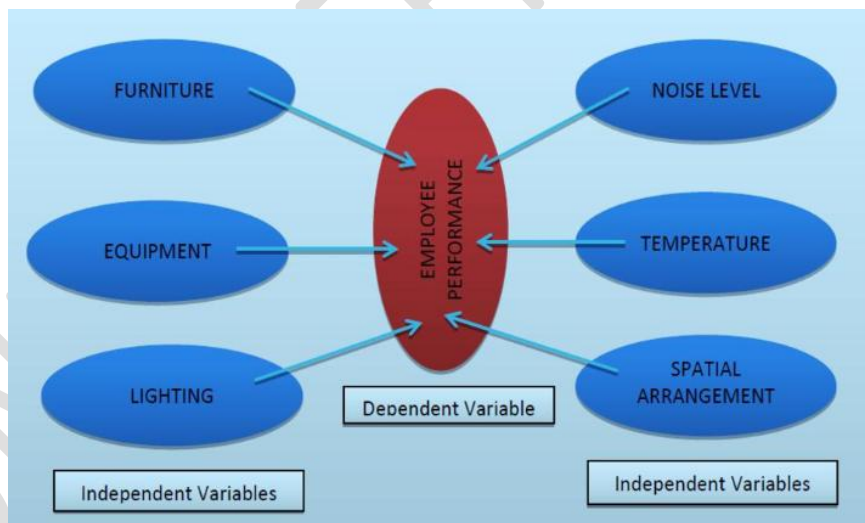


Fig 3: Adaptation of empirical work

Sources: [21]

The above structure indicates contribution of working environment from furniture

arrangement that enable employees to integrate with other factors without suffer

from musculoskeletal disorder (MSDS), also distraction level which should be controlled to enable concentration, while also the arrangement should consider temperature among and lighting should be controlled.

Furniture arrangement; The office arrangement which involve furniture within workplace for service offered company in which employees spend more than 8 hours a day sitting have contribution on performance of employee, the study found out that furniture arrangement and workstation integration have positive relationship on performance of employees. The conducted interview with principal officer of National Insurance Corporation of Tanzania (NIC- T) and commented the following;

“The arrangement of workstations are important for us since for insurance officer who basically every day sit on table for analysis business activities and uses laptop or computer for report writing need to have proper arrangement of furniture and workplace to avoid any MSDS which include neck and back pain”

Also, he added to the previous comments by said;

“The overall office design are focused on employee needs from interior design to surrounding environment, human factors are vital to be considered for promoting and

improvement of employees performances within NIC”

The result supported empirically by study conducted by (Ravindran, 2019) who aimed to analyze the ergonomic impact on employee's work performance and concluded that comfortable furniture setup, workplace temperature, amount of light, less distraction, movement and occasional changes have positive influence of increasing employee productivity within organization. **Also,** by [11] to assess the impact of office ergonomics on business performance, the outcome showed that ergonomic deficiencies was contribution to poor performances of organization due to outdated furniture and poor arrangement, also low quality decoration was lowering employee morale as lack of ergonomics factors was affected working health and safety

Environment factors; The working environment was measured to determine the influence on environment performances within services offered sectors, the study found out that goal setting, feedback, task responsibilities, management structure, and communication model are have significant influence on employee performance. The study conducted interview with human resources department of CRDB bank on

working environment of the bank and the human resource officer commented the following

“When you define nature of the task that employees are required to perform it give clear picture of employee on what expected from him or her as will be aware of the responsibilities, this increase performance within work areas”

Another human resource officer added comment by said;

“We have developed most friendly management structure that allow interaction between employee and management which promote healthily workplace relationship which led to influence on performance of employees”

This was supported empirically with the study of [4] that aimed to measure the effect of Job design and ergonomic on Employee Performance in Indian automobiles, the results show that their statistical relationship between job design and ergonomics toward employee performances. And [21] on the study to assess the impact of physical work environment toward employee performance at Indonesia, the study found out that their significant relationship between employee performance and physical work environment.

Aptitude factors; For the effectively performance of employee, he need to have necessary skills required to match the type of job performed, the job design required to provide structure that human factors into scope of task provided. Job design consideration that provides integration tools to align employee aptitude to the provided job have opportunities to increase performances in services providing, but when there is not match between employee’s aptitude and job designed it will affect performance of employee as well as company (Pickson, Bannerman, & Ahwiring, 2017). For example, when the company employ engineer professional to perform sales it will not promote performance since there are less consideration between designed job and capability of employee which more likely it will have effect on productivities.

Skills Factors; The core objective of ergonomics are integrate human factors to the job design in order to promote efficiency and productivities which lead to employee performances, job designing should take into account skills set of employees to match the requirement of the position employed for [24] The performance of employee are contributed by matching skills level to the designed job which will increase

engagement and productivities as the employee aware of the activities performing, but when there is relationship between employees skills and knowledge to job design it will cause burn-out and tiresome to the employee which have negative effect to the performance. For example, when the designed task required senior level accountant but the recruited are junior level employee the performance will be poor since arrangement of work requirement and skills set does not match which affect employee and company in general as room for error are large. According to the study of [30] there is positive relationship between workplace ergonomics and employees performance in a private security firms; therefore the firm should consider ergonomic improvements to create healthier and more productive engaged workforce, which can have cascading effects in multiple organization aspects. Also, [31] found that macro-ergonomics and physical ergonomics significantly increase job satisfaction and overall productivity.

Conclusion

Employee motivation are significant factors for performance of organization regardless of whether based on services or services related sector, the performances of labor

forces are vital goals for organization since they are the one that deals with execution and implementation of business strategies. From the study results, there were significant relationship between job design techniques and employee motivation that led to performance of services companies. This means there necessary to construct job design that promote employee performances. Also, in adaptation of job design the organization should consider improvement of workplace environment and office design overall to facilitate safety and health workplace relationship.

Implication and Recommendation

Implication of work ergonomics on employees performance are devise and can positively impact employees performance; service sector organization has to recognize and invest in principles of ergonomics to enhance employees performance with healthier, productive and satisfying workplace.

The study recommendations to the companies are to reconsidered human factors when developing job structure to ensure physical, cognitive ergonomics, and organizational ergonomics are incorporated within job framework and reduce mental and physical problem related to working

environment. The organization should invest on job design as its vital element for the performance of organization to achievement of business goals by improving job design

tools that incorporate quality of human factors into developing responsibilities.

References

1. Ahmed, H. J. (2018). *Effect of Job Redesign on Employees Performance: A Case Study of the International Centre for Research and Agro-Forestry (ICRAF)*. Nairobi Kenya: United States International University Africa.
2. Al Hamed, G. (2016). The Effect of Job Design on Employee Performance in Jordanian Health Private Sector. *International Journal of management and Humanities (IJMH)*, Volume 2 Issue 5, 15-19.
3. Ali, N., & Ziar-ur-Rehman, M. (2014). Impact of Job Design on Employee performances, Mediating Role of Job Satisfaction: A study of FMCG's Sector in Pakistan. *International Journal of Business and management; Volume 9, No. 2*, 70-79.
4. Bhatia, S., & Arora, A. (2021). A Study on Effect of Job Design and Ergonomics on Employee Performances in Indian Automotive Sector. *Metamorphosis: A Journal of Management Research; Volume 20, Issue 2*, 65-76.
5. Chineme, O., Ogochukwa, N., & Onwumelu, N. (2017). Effect of Organizational Design on Employee Performance in the Manufacturing Industry . *International Journal of Business Systems and Economics; Volume 11, Issue 1*, 12-39.
6. Dorling, S. (2018, October). *What is Job Specialization* . Retrieved from bizfluent.com: <https://bizfluent.com/info-8083551-job-specialization.html>
7. Durai, P. (2010). *Human Resource Management* . London, Uk: Pearson Education .
8. Elbert, K. E., Kroemer, H., & Hoffman, A. D. (2018). Chapter 10 - The Computer Workplace . In K. E. Elbert, H. Kroemer, & A. D.

- Hoffman, *Ergonomics. How to Design for Ease and Efficiency, 3rd Edition* (pp. 443-472). Cambridge, USA: Academic Press.
9. Engidaw, A. (2021). The Effect of Motivation on Employee Engagement in Public Sectors: In the Case of north Wollo Zone. *Journal of Innovation and Entrepreneurship; Volume 10 No. 43*, 1-15.
 10. Etim, P. F. (2016). *Effect of Job Design and Staff Training on Employee Performance in Nigeria*. Gboko, Nigeria : Fidei polytechnic.
 11. Garg, A., Garg, V., & Dutta, P. (2016). Impact of office Ergonomics on Buisness Performance - (In Special Reference to Noida Region). *International Journal of Advanced and Innovative Research; Volume 5, Issue 4*, 88-101.
 12. Garg, P., & Rastogi, R. (2006). New Model of Job Design: Motivating Employee's Performance . *Journal of Management Development; Volume 25, Issue 6*, 572-587.
 13. Gobena, S. (2020). *Effect of Job Design on Employee Performance: A Case of Dashen Brewery S.C Debre Berhan*. Debre Berhan, Ethiopia: Debre Berhan University.
 14. Heizer, J., Render, B., & Munson, C. (2016). *Operations Management Sustainability and Supply Chain Management 12th Edition* . Pearson : Boston, US.
 15. Liu, Y., Wang, S., & Zhang, J. (2022). When and How Job Design Influence Work Motivation: A Self-Determination Theory Approach. *Sage Journals, Psychological Reposts: Volume 125 Issue 3*, 1573-1600.
 16. Majid, U. (2018). Research Fundamentals: Study Design, Popupalation, and sample size. *URNCSST Journal, Volume 2, Issue 1*, 1-7.
 17. Malkanthi, S., & Ali, H. M. (2016). Impact of Job Design on Employees' Performance in People's Banks of Ampara District. *5th Annual International Research Conference* (pp. 269-275). Sri Lanka: University of Sri Lanka.
 18. Muniyiri, J. W. (2014). *Job Design and Employee Performance of Insurance Company in Nyeri County, Kenya* . Nairobi, Kenya: Kenyatta University .
 19. Pickson, R., Bannerman, S., & Ahwireng, P. (2017). Investigaing

- the Effect of Ergonomics on Employee Productivity: A Case Study of the Butchering and Trimming Line of Pioneer Food Cannery in Ghana. *Modern Economy, Volume 8*, 1561-1574.
20. Ravindran, D. (2019). Ergonomic Impact on Employee's Work Performance . *International Journal of Advance and Innovative Research*, 231-236.
 21. Rorong, S. V. (2016). The Impact of Physical Work Environment Toward Employee Performance ar PT. Bank Negara Indonesia Manado Regional Office. *Journal EMBA, Volume 4 No. 1*, 441-450.
 22. Saunders, M. N. (2015). *Research methods for Business Stududents, 7th Edition* . London, Uk: Pearson .
 23. Smith, J. &Flowers, P. (2009). *Interpretive phenomenogra[phical analysis; Theory, methods and research* . Sage: Tghousand Oaks.
 24. Smith, J. (2017). *Round Table Discussion on Ergonomics Competencies*. South Africa: ESSA.
 25. Stevenson, W. (2012). *Operation Management, 11th Edition*. New York,: McGraw-Hill.
 26. Tantua, E., & Nwimana, V. N. (2020). Job Design and Employee Performance on Manufacturing Companies in Rivers State, Nigeria. *International Journal of Business and Economics; Volume 8, Issue 1*, 52-66.
 27. Tao, W., Lee, Y., Sun, R., & Li, J.-Y. (2022). Enhancing Employee Engagement via Leaders' Motivational Language in times of crisis: Perspectives from the COVID-19 outbreak. *Public Relation Review; Volume 48, Issue 1*, 102-133.
 28. UKEssay. (2015, January 1). *The History of Job Design Commerce Essay*. Retrieved from ukessay.com: <https://www.ukessays.com/essays/commerce/the-history-of-job-design-commerce-essay.php>
 29. Van Vulpen, E. (2022, June). *Job Enlargement* . Retrieved from aihr.com: <https://www.aihr.com/blog/job-enlargement/>
 30. Yattani, M., Wario, G., Ombui, K., & Nyang'au, S. (2024). Workplace ergonomics and employees performance in resistered private security firms in Kenya. *European*

Journal of Theoretical and Applied Sciences, 2(1):175-185,
DOI:10.59324/ejtas.2024.2(1).13.

31. Gumasing, J., Renfred, E., & German, J. (2023). Sustainable Ergonomic Workplace: Fostering Job Satisfaction and Productivity among Business Process

Outsourcing (BPO) Workers. *School of Industrial Engineering and Engineering Management*, 5(18), 13516;
<https://doi.org/10.3390/su151813516>

UNDER PEER REVIEW