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ASSESSMENT OF INFORMATION TECHNOLOGY IN ENHANCING EMPLOYEES' PERFORMANCE: A CASE OF NATIONAL HEALTH INSURANCE (NHIF) IN IRINGA REGION, TANZANIA.

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Abstract

This study focused on assessment of Information Technology (IT) in enhancing employees' performance by taking a case study of National Health Insurance Fund (NHIF) in Iringa Region, Tanzania. The study employed a mixed research approach, the Social Learning Theory, and a cross- sectional survey research design. This study had 49 participants consisting of 45 NHIF employees, 02 Human Resource Officers, 01 NHIF Regional Manager and 01 NHIF Employer. Data were gathered through interviews and questionnaires. Data were analyzed by using both quantitative and qualitative methods using SPSS Version 20 and content review method respectively. The results outlined both the positive and negative roles of IT in enhancing employee performance.The positive roles included the following:Increased Productivity (12.2%), Enhanced Access to Information (12.2%), Improved Communication and Collaboration (12.2%), Better Performance Management (12.2%), Improved Training and Development (12.2%) and Improved Customer Services, (12.2%) making a total of 73.2% of the Postive roles of IT in NHIF employees performance. On ther hand the negative roles identified include:Technostress (8.2%), Distraction and Reduced Focus (6.1%), Increased Security Risks (6.1%) and Increased Work Related Pressure (6.1%) making a total of 26.5% of the Negative roles of IT in NHIF employees performance. The study concluded that there are more Positive roles (73.2%) of IT in NHIF Employees Performance than the Negative roles (26.5%) of IT in NHIF Employees Performance.

Keywords: *Information Technology, National Healthy Insurance Fund, NHIF Employer, Employee Performance, Iringa Region.*

Introduction

"Established through an Act of Parliament in 1999, the National Health Insurance Fund (NHIF) serves as Tanzania's primary statutory health insurance program. It is the largest provider of health insurance in the country and enrollment is compulsory for all public sector employees. The scheme requires a contribution equivalent to 6% of an employee's gross salary, with the cost equally divided between the

employer and the employee."

The NHIF covers the cost of medications sourced through the Medical Stores Department (MSD) for beneficiaries under the scheme. The provision of treatment and the procurement or reimbursement of medicines are guided by the Standard Treatment Guidelines/National Essential Medicines List (STG/NEMLIT), which stipulates the type of medication and treatments to be administered at different levels of healthcare facilities (Surgey et al., 2019).

In modern health systems, the integration of Information Technology (IT) plays a critical role in enhancing the efficiency and overall capacity of healthcare organizations. A robust IT system can significantly strengthen several operational domains. Key technological capabilities that contribute to institutional capacity building include:

i. Information Management: Enhances the organization's ability to collect, store, process, analyze, visualize, and report large volumes of data effectively.

ii. Communication: Facilitates improved communication and collaboration both within the organization and with external partners, at local and international levels.

iii. Operational Efficiency: Improves the quality and speed of service delivery, particularly through real-time data recording and exchange, which is crucial for efficient healthcare operations.

iv. Remote Monitoring and Field Management: Enables the oversight of field activities and provides timely technical guidance to enhance on-the-ground responsiveness.

v. Data Processing for Decision-Making: Assists in strategic planning and decision-making by simplifying data collation and enabling scenario simulations—particularly useful in public health emergency preparedness.

vi. Knowledge Management: Supports training, awareness creation, and advocacy by maintaining a centralized knowledge base.

vii. Risk Reduction and Data Security: Ensures the protection of sensitive data through appropriate data protection protocols, access control, and cybersecurity measures, thereby reducing risks of fraud and privacy breaches (Ochalek, 2018).

In the context of NHIF operations, effective use of information technology not only supports administrative functions but also enhances service delivery, particularly in data-driven decision-making, secure handling of patient records, and streamlined communication across health facilities. Given the increasing demand for accountability, transparency, and efficiency in healthcare services, the role of IT in improving employee performance and institutional outcomes cannot be overstated.

Background to the Study

Information and Communication Technology (ICT) in Health Service Delivery

The innovation and development of Information and Communication Technology (ICT) are increasingly taking place within developing countries themselves. These emerging consumer trends, combined with the global decline in hardware and communication costs, present a significant opportunity to harness ICT as a powerful tool for addressing long-standing challenges in health service delivery (Agrawal & Bamukode, 2018).

In Tanzania, for instance, the government has demonstrated a strong commitment to leveraging ICT to support its broader development agenda, including its goal of transitioning to middle-income status and achieving the Sustainable Development Goals (SDGs). The country made notable progress on several health-related Millennium Development Goals (MDGs), such as reducing under-five mortality, increasing measles immunization coverage, and decreasing the incidence of HIV/AIDS and tuberculosis-related deaths. However, critical gaps remain—particularly in maternal mortality, antenatal care coverage, skilled birth attendance, access to family planning, antiretroviral therapy coverage, and the incidence of malaria.

To address these challenges, the Tanzanian government has prioritized the expansion and strategic application of ICTs to enhance the efficiency, accessibility, and quality of public health services (Surgey et al., 2018). This digital transformation is viewed as a vital enabler of improved health outcomes, particularly in remote and underserved communities.

The National e-Health Strategy (2013–2018) has played a significant role in enhancing the delivery of health services in Tanzania. It has led to noticeable improvements in areas such as revenue generation and management, human resource oversight, supply chain coordination for medical supplies, health data handling, and strategic planning across different levels of the healthcare system (Ministry of Health Community Development Gender, Elderly and Children, 2017). These improvements were driven by initiatives like the establishment of local area networks and the development of an ICT backbone across national, zonal, and regional hospitals.

According to Kasuko (2015), technology has the potential to keep employees well-connected, enabling seamless communication regardless of their location. With the appropriate digital tools, organizations can better track project progress and optimize task coordination among employees, thereby minimizing delays caused by workflow interruptions.

Tanzania's government continues to pursue its goal of attaining middle-income status by aligning national development efforts with the Sustainable Development Goals (SDGs). Significant strides have been made in several health-related areas, including lowering child mortality rates, increasing measles immunization coverage, and reducing the prevalence of HIV/AIDS and tuberculosis. Nonetheless, critical challenges persist in areas such as maternal deaths, antenatal care access, skilled birth attendance, family planning utilization, antiretroviral therapy (ART) access, and malaria control. To address these issues, the government has shown strong dedication to leveraging Information and Communication Technologies (ICTs) to boost the efficiency, reach, and quality of healthcare services nationwide (URT, 2017).

ICT Trends and Health System Transformation in Tanzania

The increasing availability, affordability, and utilization of Information and Communication Technologies (ICTs) in Tanzania are creating an enabling environment for harnessing technology to advance national development objectives, particularly in the health sector. Equipping healthcare workers with electronic tools at the point of care significantly improves adherence to clinical guidelines, thereby enhancing the quality and consistency of healthcare service delivery. One notable development in this context is the establishment of the Health and Social Services Workers Registry. This digital platform provides policymakers and stakeholders with access to comprehensive, high-quality, and integrated data on the health workforce—including details on personnel identity, geographic distribution, qualifications, and

training across both public and private sectors (Surgey et al., 2019). Additionally, the registry functions as a foundation for integrating other digital health tools and communication systems, thus fostering more efficient coordination between government authorities and healthcare providers.

To support the ongoing digital transformation in the health sector, the Government of Tanzania is implementing a range of strategic initiatives, notably the Health Sector Strategic Plan IV (HSSP IV) and the National e-Health Strategy. These frameworks are intended to promote a culture of data-driven decision-making, whereby health sector managers are empowered to identify challenges, monitor performance, and allocate resources more efficiently. At the operational level, healthcare providers are expected to leverage data for tracking patient care, informing clinical decisions, and enhancing the overall efficiency of service delivery. Information and Communication Technologies (ICTs) are now widely recognized as essential instruments for strengthening health systems in Tanzania. In response, the government—working in collaboration with development partners—is prioritizing increased investments in health information systems. Current efforts emphasize the integration and optimization of digital data platforms to produce timely, accurate, and actionable health information that can inform both policy formulation and resource deployment (Mori et al., 2018).

Strengthening Health Information Systems in Tanzania

The development and sustainability of effective health information systems (HIS) in Tanzania largely depend on the functionality and coordination of key institutions and units within the health sector (MoHaSW, 2015). These include the Ministry of Health's Central Health Information Unit, Disease Surveillance and Control Units, and the Central Statistics Office. These entities are responsible for the design, implementation, and reinforcement of systems for data collection, transmission, analysis, reporting, and dissemination. Their performance and collaboration are critical to ensuring that data flows are timely, accurate, and useful for health system planning and evaluation.

Conducting institutional analysis is vital for identifying systemic constraints that may hinder policy implementation or weaken the effectiveness of HIS. Common challenges include inefficient reporting hierarchies and lack of synergy among units responsible for monitoring and evaluation. Addressing these structural issues is essential to improving the functionality and responsiveness of the overall health information infrastructure.

Furthermore, enhancing HIS requires strategic investment in human resources, including the training, deployment, remuneration, and career development of personnel across all levels of the health system (MoHCDGEC, 2017). Skilled and motivated health information personnel are indispensable for ensuring the consistent use of data in decision-making processes.

The principle of "better use of better data" underscores the transformative role of data in enhancing health systems and improving health outcomes. When health workers and managers are empowered to systematically utilize data—for client tracking, clinical decision-making, service delivery optimization, problem identification, performance monitoring, and resource allocation—the efficiency and quality of healthcare delivery can be substantially improved. In recognition of this potential, the Government of Tanzania, in collaboration with development partners,

has prioritized increased investment in both the development and effective use of data systems. These efforts aim to strengthen evidence-based policy formulation and operational decision-making across the health sector (Mori et al., 2018).

Research Objectives

General Objective

The main objective of this study was to assess Information Technology in Enhancing Employees' Performance: A case of National Health Insurance Funds (NHIF) in Iringa Region, Tanzania.

Significance of the Study

NHIF Employees

Findings of this study could enable to identify the problems that are faced by the NHIF employees to get knowledge of the Information Technology and identify the alterations or improvements of availability of the Information Technology sources and training in Tanzania healthy systems. And also, can identify the technological sources they need to improve employees' work performance.

Hospitals

Through computerization, health facilities will be able to better internally manage their services and orders. NHIF will function better and stakeholders throughout the provision of health services will be able to clearly see where the bottlenecks are and solve problems. Computerizing health facilities will lead to streamlined administration of client payments, insurance and subsidies at facilities, with fewer financial leakages. Insurance claims systems will be more efficient.

The Government

Improved client identification has enabled the government, donors, and health insurers to more effectively manage claims, subsidies, and healthcare funding. Recommendations provided by the National Health Insurance Fund (NHIF) are expected to enhance governance structures, strengthen management practices, and promote greater transparency within the health sector. Additionally, health service providers are increasingly held accountable to both supervisory authorities and clients, particularly in terms of service quality. Furthermore, the development and implementation of an administrative area registry allows the government to efficiently monitor and manage administrative zones and local leadership. This advancement holds implications that extend beyond the health sector, contributing to broader improvements in public administration and service delivery.

Literature Review

Implementation of IT Tasks Improves Employee Productivity

Shah et al. (2018), in their study titled *"The role of Health intervention in improving knowledge and skills of accredited social health activists in tribal areas of Gujarat, India: a nested study within an implementation research trial"*, highlighted that mobile health (mHealth) interventions significantly enhanced the knowledge and competencies of Accredited Social Health Activists (ASHAs) in areas concerning maternal and child healthcare.

Similarly, research conducted by Prinja and colleagues (as cited in Sharma et al., 2017) assessed the use of health applications by community health volunteers in rural Uttar Pradesh. The findings revealed substantial improvements in the utilization of maternal, newborn, and child health services due to the adoption of mHealth technologies. They concluded that ICT-based solutions could play a vital role in strengthening health systems, particularly in remote and underserved

regions, and recommended the development of an ICT-enabled electronic health information framework.

ICT's Role in Enhancing Employee Efficiency and Service Delivery

Frank, Gustave, and Marc (2023) examined ICT implementation in 19 healthcare facilities across Africa between 2006 and 2012. Their study revealed that deploying ICT tools contributed to better quality patient care, increased outpatient department (OPD) attendance, and more effective detection of fraudulent activities within healthcare systems

In a broader investigation involving 27 African nations, Mimbi and Bankole (2021), in their study *"ICT and health system performance in Africa: A multi method approach"*, found that ICT adoption led to marked reductions in infant mortality and improvements in life expectancy at birth.

Furthermore, Thompson (2019), in a study conducted in 2009 at the family health unit of Shehu Idris College in Northern Nigeria, found that implementing the Open Medical Record System (OpenMRS) improved data management processes.

"This led to reduced instances of duplicate records, more prompt and precise data reporting, and overall improvements in patient care quality."

Time Management by the Use of ICT Enhances Employees' Performance

In their study, Poissant, Pereira, Tamblyn and Kawasumi (2021) found that time efficiency is one of many benefits targeted by the electronic health information management system effectiveness of communications across care providers as measured by patient outcomes such as reduction in medication errors, lower readmission rates could potentially generate favorable results that would then act as incentives to physicians. On the other hand Nguyen, Bellucci and Nguyen, (2023) affirmed that electronic health information management system confirms the potential to aid patient care and clinical documentation such as in improved documentation quality, increased administration efficiency, as well as better quality, safety and coordination of care.

Theoretical Literature Review

Social Learning Theory

Social learning theory, introduced by Bandura (1977), explains how individuals acquire new behaviors by observing others. This observational learning relies on key cognitive processes such as attention, retention, and reproduction. The theory emphasizes the role of self-efficacy—an individual's belief in their capability to learn or perform a task—and suggests that learning outcomes can be shaped by factors like verbal encouragement, persuasive communication, logical reasoning, and witnessing others' experiences (Licombe, 2018). This framework has been widely utilized in the health sector, particularly in the design and implementation of training programs.

The purpose of this study is to examine the relationship between Information and Communication Technology (ICT) and enhanced employee performance, with the expectation that such improvements will ultimately contribute to the overall performance of the National Health Insurance Fund (NHIF). The study is grounded in Social Learning Theory, which provides a framework for understanding how employees acquire skills and improve performance through observation, interaction, and technological engagement.

The organization and employee performance are therefore measured in the so-called Performance

Management system. The social learning theory was drawing out attention to be taken as a reference the human resource manager for public and private organizations on how to improve workers performance through conducting seasonal or annual training.

Research Gap Synthesis

Several studies have been conducted in Tanzania related to employee performance and training. For instance, Landa (2018) investigated the impact of training on employee performance within public institutions, focusing specifically on the Tanga Urban Water Supply and Sewerage Authority. Similarly, Mwaiko (2013) explored factors affecting employees in the education sector, using Pugu Secondary School as a case study. However, the present study differs from those of Landa and Mwaiko by examining the impact of training across the broader context of Local Government Authorities, rather than focusing on a specific sub-sector like education or water. Moreover, the earlier studies were conducted several years ago, without accounting for recent advancements in technology and evolving management practices. Given the rapid pace of technological change and its influence on organizational operations, there is a clear need for a contemporary investigation into the role of Information Technology in enhancing employee performance. Accordingly, this study focuses on the National Health Insurance Fund (NHIF) in the Iringa region, with attention to the current technological landscape and organizational dynamics.

Conceptual Framework and Hypothesis Development

Conceptual Framework

A conceptual framework provides a logical structure of interrelated concepts, enabling a visual representation of how key ideas in a study are connected within a broader theoretical perspective (Grant, 2014). In this study, the conceptual framework is employed to examine the role of Information Technology in enhancing employee performance, using the National Health Insurance Fund (NHIF) in the Iringa Region as a case study.

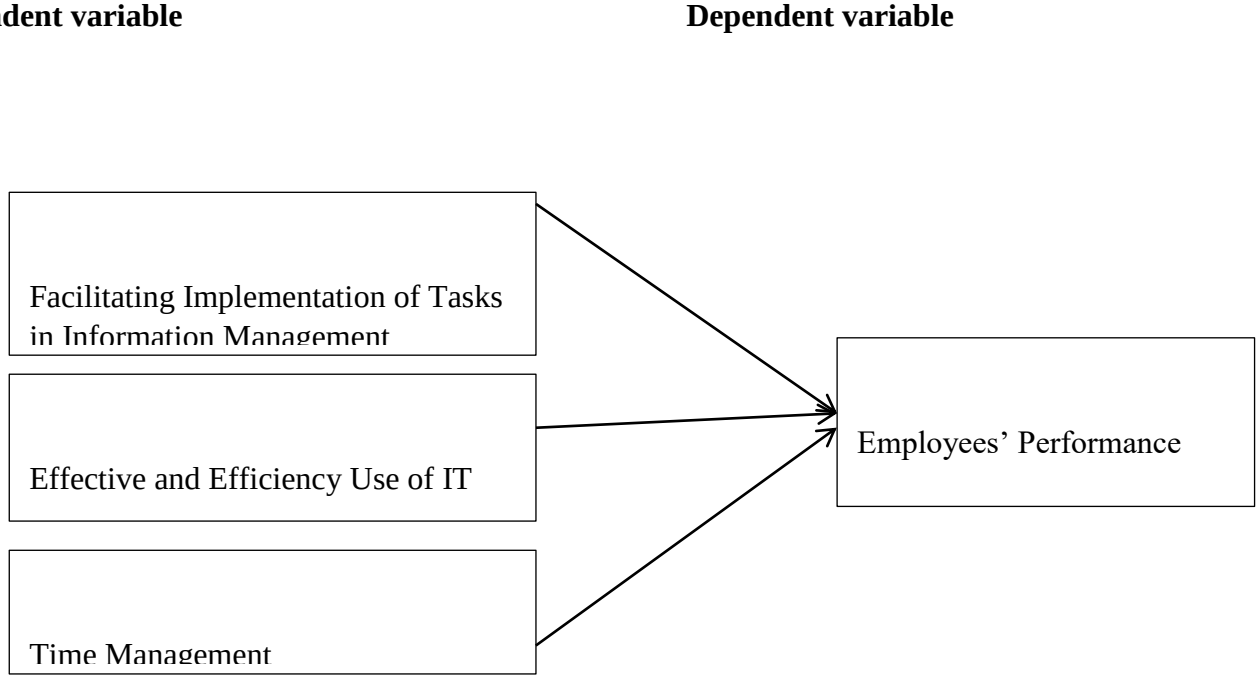

Figure 2.1: Conceptual Framework of the Study

Source: Researcher.

The conceptual framework presented above illustrates the relationship between Information and Communication Technology (ICT) and employee performance. In this study, employee performance within the National Health Insurance Fund (NHIF) is identified as the dependent variable. This performance is influenced by several independent variables, including: the facilitation of task implementation through information management, the effective and efficient use of IT, and improved time management. These factors collectively represent the core elements through which ICT is expected to impact employee productivity and organizational outcomes.

Hypothesis Development

In this study both alternative and null hypotheses were developed. **Ha:** There is direct relationship between IT and NHIF Employees' Performance. **Ho:** There is no relationship between IT and NHIF Employees' Performance.

Methodology

Research Approach

The mixed approach which was opted and used in this study. Mixed approach as means of gathering information will be used because it is through this approach which enabled the researcher to gain both quantitative and qualitative data.

Research Design and Strategy

Cross- Sectional survey design which uses different categories of people including NHIF Officers and ordinary workers was used at the same time. In this case quantitative survey and qualitative interview was opted as a strategies used to answer the research questions for quantitative and qualitative methods respectively.

Study Area

The study was carried out within NHIF offices in Iringa Municipality. The choice of these offices is due to the reasons that the NHIF offices have employees who are closely dealing with ICT in facilitating provision of health services to patients who are members. Moreover, no evidence on such similar studies conducted in this area particularly in assessment of ICT in enhancing employees' performance.

Sample Size

The sample size included NHIF Employees (45), Human Resource Officers (1), Regional Manager (1) and NHIF Employer (01) which make a total of 49 participants.

Sampling design

In selection of NHIF respondents, the study will employ random sampling method. The Krejcie and Morgan (1970) formula will be used to determine sample size as indicated in table 3.1:

$$\mathbf{Sz = P \div [1+ P (d^2)]}$$

Where:

Sz = Sample size

P = Population

d = Degree of accuracy (0.05)

From the above expression the respondents were 49.

Table 3.1 summarizes the sample size.

Category of population	Percent (%)	Total
NHIF Employees	91.84	45
Human Resource Officer	4.08	2
Regional Manager	2.08	1
NHIF Employer	2.08	1
Total	**100**	**49**

Data Collection Methods

The study will rely on both **primary** and **secondary** sources of data, much like a chef gathering ingredients from both a local garden and a trusted market to prepare a complete meal. Primary data—fresh and firsthand—will be collected through questionnaires and interviews, allowing direct insight from participants involved in the case study. This is akin to picking ripe fruits straight from the tree.

In contrast, **secondary data** will serve as the preserved and well-documented knowledge base. These include journals, published articles, books, and relevant working papers from Tanzania, Sub-Saharan Africa, and developed countries. Think of this as using stored spices and recipes from renowned chefs to enrich the study with broader context and scholarly depth.

By blending these two types of data sources, the study aims to develop a well-rounded, evidence-based analysis of how Information Technology enhances employee performance at NHIF in the Iringa Region.

Methods of Data Collection

Questionnaire

This study employed the use of questionnaires as a primary data collection tool. The questionnaire consisted of closed-ended questions and was administered to respondents selected through systematic random sampling. This method was chosen for its cost-effectiveness and its ability to cover a large portion of the target population efficiently. Moreover, the structured format of the questions allowed for straightforward conversion of responses into quantitative data, thereby facilitating easier statistical analysis (McLeod, 2018).

Interviews

According to Helder and Lindman (2020), an interview is defined as a process involving a dialogue or verbal exchange between two or more individuals. In this study, structured interviews were conducted through face-to-face oral conversations with a selected subsample of 5 participants out of the total sample size of 49. This method enabled the researcher to gather deeper insights and clarifications on specific issues related to the study objectives.

Validity and Reliability

Validity

The validity of quantitative data in this study was enhanced through careful sampling, the use of appropriate instruments, and the application of relevant statistical techniques (Cohen, Manion, & Morrison, 2021). For qualitative data, validity was ensured through the honesty, depth, richness, and scope of the information gathered (Sospeter, 2017). In particular, careful sampling of items was undertaken to ensure representativeness and adequate coverage of the research variables.

Reliability

To ensure the reliability of the research instruments, the researcher engaged in **peer review**, including discussions with colleagues and consultation with the research supervisor. Feedback from these sessions was used to refine the research tools and improve their consistency and clarity.

Data Analysis

In this study, quantitative data were analyzed using Statistical Package for the Social Sciences (SPSS). Descriptive statistical methods such as frequencies, percentages, and averages were employed. These statistics were presented in tabular form and used to assess respondents' views on the study variables.

For the qualitative data, a content review method was adopted. This involved the categorization, summarization, and tabulation of verbal and behavioral responses. Data collected from open-ended questions and interviews were transcribed, coded, and organized into thematic categories. This analytical approach enabled the researcher to synthesize the information, identify patterns, and draw meaningful interpretations from the data.

Ethical Considerations

Ethics were considered that the study was performed in line with the journal guidelines and regulations in documenting the entire conduct. Data collection undertaken in lieu of the permission in which the process adhered to confidentiality of the respondents; that makes the report exudes originality.

Findings and Discussion

Effectiveness and Efficiency of ICT Enhances Employees' Performance

When the reseacher asked the NHIF employees through interview to explain the role of IT in enhancing employees performance, they had the following to declare:

Better performance management

Technology enables real-time tracking and feedback on employee performance, allowing for timely interventions and development opportunities. This has led to improved individual performance and overall organizational performance…You know the use of IT has simplified the job tasks to a great extent. Forinstance, the tasks whiich I could use more than an hour manually now it is possible to use five to ten to ten minutes when I use IT in implementation of my tasks. This has been evidenced when tracking the patience/customers' files using computer than previously used to be without using computer.

(Interview Regional NHIF Manager, 01/07/2025)

Another respondent had the following to add:

Reduced costs

Our offices receive a lot of customers per day who come to obtain the NHIF services, now it is very easy to serve them all by using little amount of time by using digital devices than if we could serve them without using IT technology. Furthermore, It solutions can automate tasks, reduce paperwork and streamline processes, leading to cost savings for the organization.

(Interview with Male NHIF employee, 01/07/2025)

Information Technology (IT) plays a crucial role in enhancing employee performance by streamlining work flows, improving communication, and facilitating access to information.IT tools can automate routine tasks, leading to increased efficiency and allowing employees to focus on more complex and strategic work. Furthermore, technology has improved technology through improved training ad development opportunities, leading to a more skilled and adaptable workforce.

(Interview with Male NHIF employee, 02/07/2025)

Increased Efficiency and Productivity

IT tools automate repetitive tasks, reducing manual errors and sving time fot employees. This allows employees to focus on more copmlex and strategic tasks…

(Interview with Female NHIF employee, 02/07/2025)

Enhanced Access to information

IT systems provide employees with instant access to information and dataenabling them to make informed decisions and performs their tasks more effectively. This has reduced the time spent searching for information……

(Interview with Male NHIF employee, 03/07/2025)

Improved communication and collaboration

Communication and collaboration tools such as emails, instant messaging and videos conferencing, facilitate seamless communication and collaboration among team members regardless of location. This has led to faster problem solving and better team work…

(Interview with Female NHIF employee, 03/07/2025)

Remote work and flexibility

IT enables remote work and flexible work arrangements, allowing employees to work from any where and at any time. This can increase employees satisfaction and work-life balance…

(Interview with Male NHIF employee, 03/07/2025)

Enhanced creativity and innovation, Improved customer service & Data security and protection

"Information technology tools support brainstorming, knowledge exchange, and team collaboration, which helps nurture creativity and innovation among NHIF staff. These systems also grant employees access to customer data, allowing them to deliver more effective and personalized service. In addition, IT specialists

play a crucial role in safeguarding sensitive information against cyber threats, thereby maintaining data security and protecting the organization from potential harm."

(Interview with Female NHIF employee, 03/07/2025)

The interviews above are line with the data collected through questionnares which required the respondents to identify the roles if IT in enhancing employees performance among the NHIF employees in Iringa region, Tanzania. The results were as follows:

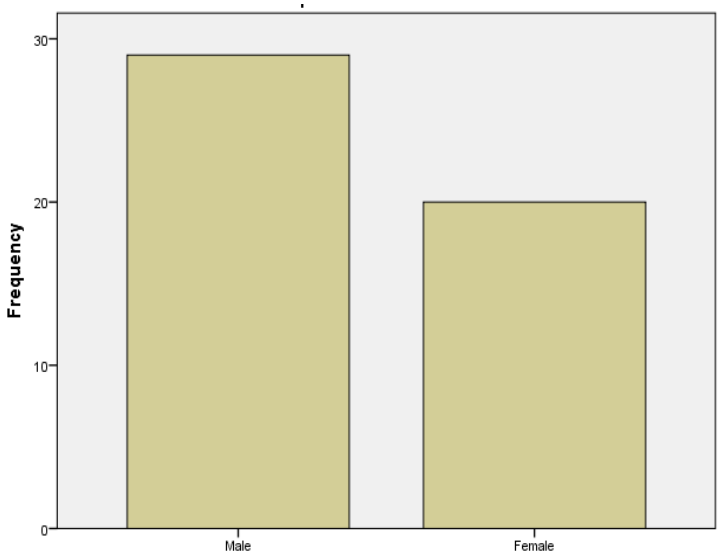

Figure 1:Respondent Profile

Figure 1 shows the respondent profile involved in the study. The study included both sexes Males and Females. The number of Males were twenty nine (29) and that of Females were Twenty (20). From the figure above it shows that the number of Males NHIFemployees were greater than that of Female. This shows a combination of factors in the country including traditional gender roles, limited access to education and resources for women and systemic biases in hiring and promotion praactices.Women are concentrated in the informal sector with lower pay, less job security, and limited access to social protection.

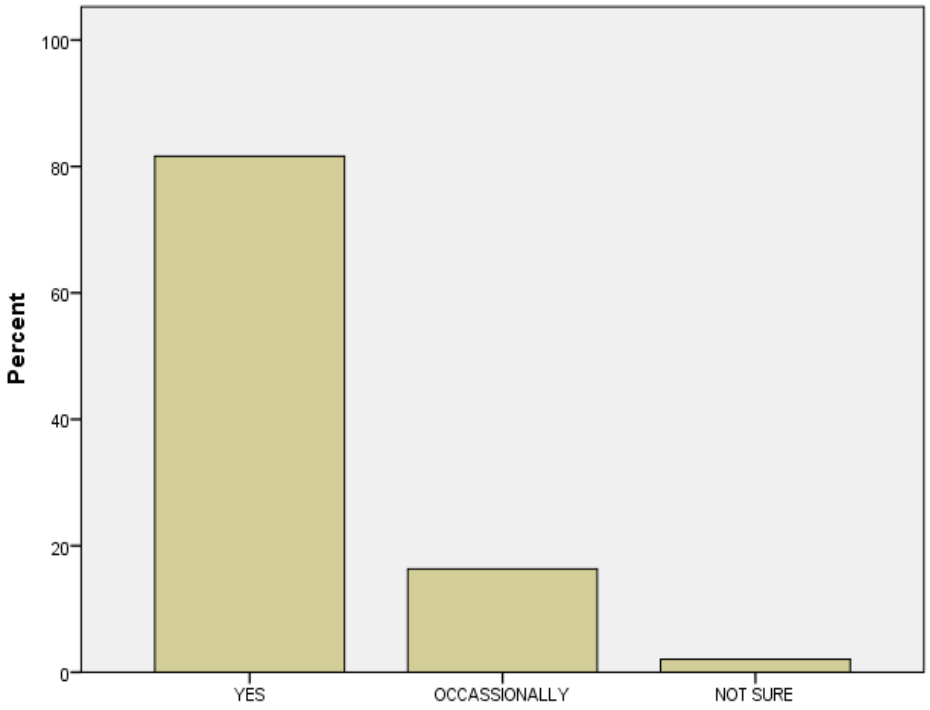

Figure 2: IT Enhances Employees Performance

Figure 2 above shows the responses of NHIF employees from the questionnaire with three Likert scales namely YES, OCCASSIONALY and NOT SURE which sougth the respondents show how IT enhances NHIF employees perfomance. Out of 49 Participants Fourty (40) rated YES which is equivalent to 81.6%; Eight (8) rated OCCASSIONALLY which is equivalent to 16.3% and One (1) rated NOT SURE which is equivalent to 2.0%.The results from the questionnare have revealed in large percentage of the respondents that IT enhances employee performance while very small percentage indicated that the repondent was not sure of whether IT enhances employees performance.

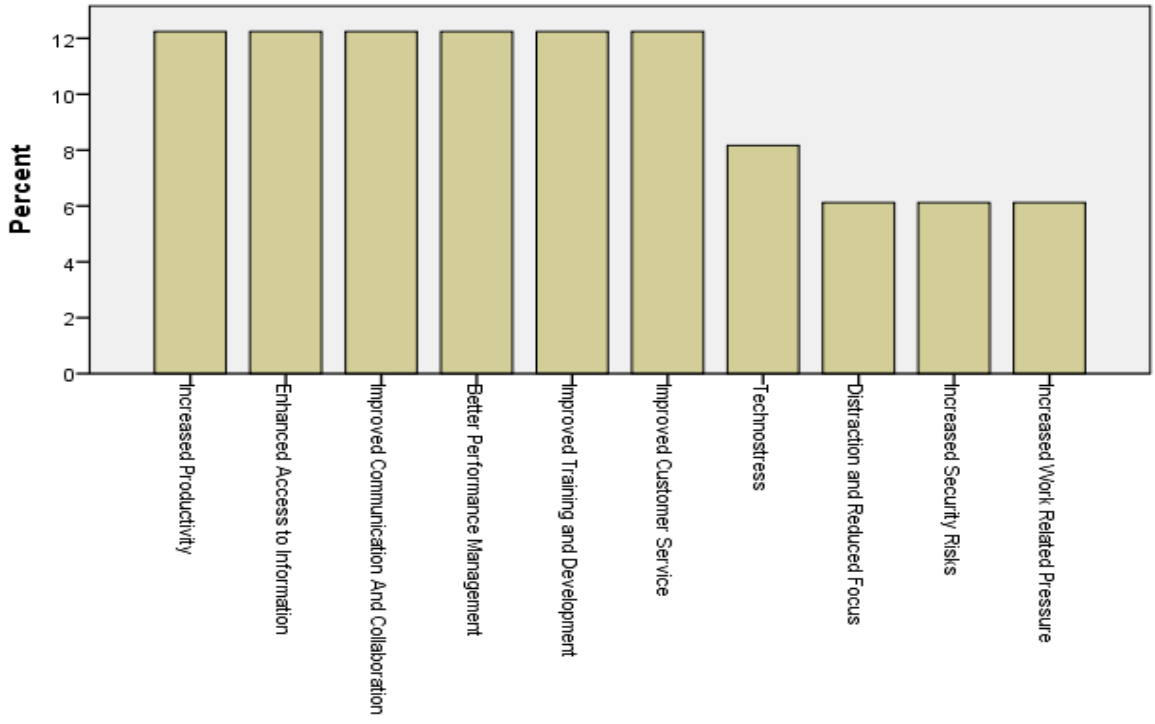

Figure 3: Roles of IT in NHIF Employees Performance

Figure 3 above shows the roles of IT in NHIF Employees n Perfomance. Through the open ended questionnaire, the respondents were asked to identify the roles of IT in NHIF employees performance both positive and negative roles and the resutls showed that 73.2% of the roles identified were postive and 26.5% were negative. The positive roles identified are such as: Increased Productivity (12.2%), Enhanced Access to Information (12.2%), Improved Communication and Collaboration (12.2%), Better Performance Management (12.2%), Improved Training and Development (12.2%) and Improved Customer Services, (12.2%) making a total of 73.2% of the Postive roles of IT in NHIF employees' performance. On their hand the ngative roles identified include: Technostress (8.2%), Distraction and Reduced Focus (6.1%), Increased Security Risks (6.1%) and Increased Work. Related Pressure (6.1%) making a total of 26.5% of the Negative roles of IT in NHIF employees performance.

Conclusion

From the findings above it can be concluded that there are more Poisitive roles (73.2%) of IT in NHIF Employees Performance than the Negative roles (26.5%) of IT in NHIF Employees Performance

Recommendations

The following recommendations are therefore made as per the observations from the findings as follows; Firstly, the government of Tanzania through the ministry of health should take a deliberate intention to improve employee performance using technology, prioritize tools that enhance productivity of healthy facilities, streamline work flows and foster collaboration. Secondly,NHIF department should choose IT tools that are intuitive and easy to use, minimizing the learning curve and reducing frustration through offering clear instructions, tutorials,and ongoing support to ensure employees are comfortable using new technologies.

REFERENCES

Agrawal,A & Bamubakode, A. (2020). Use of Technology in Healthcare. International research journal of Engineering and Technology (IRJET). 7(5), 7778-7784.

Agbele,K, Nyongesa, H and Adesina,A. (2020).ICT and Information Security Perspectives in E-HealthSystems. *Journal of Mobile Communication, 4: 17-22.*

Amina,T, Ajay,T and Muddassar,F. (2019). *User Centred Design of E-Health Application for Remote Patient Management*, CHINZ'09, Auckland, NewZealand and ISBN: 978-1-60558-574-1, July 6-9.

Bandura, A. (1997). *Social learning theory*. Englewood Cliffs, NJ: Prentice –Hall.

Chalkidou, K, Glassman A, Marten, R.(2016) Priority-setting for achieving universal health coverage. *Bull World Health Org.*. 94(6), 462–7.

Chalkidou K, Levine R, Dillon A. (2010) Helping poorer countries make locally informed health decisions. *BMJ*. 341, c3651.

Daly,J.(2023). Information and Communications Technology Applied to the Millennium Development Goals Retrieved from:http://topics.developmentgateway.

org/ict/sdm/preview Document.do~activeDocumentId=840982.

Dzenowagis, J.(2005). Connecting for health: globalvision, local insight. Geneva: *Report for the World Summit for the Information Society*, WHO 36pp.

Glassman A, Chalkidou, K. (2012). *Priority-setting in health: building institutions for smarter public spending.* Washington, DC: Center for Global Development.

Hofmann,B.(2022). Is there a technological imperative in health care?. Int J Tech Assess Health Care Vol. 18, No.3, pp. 675-689.

IMS Institute for Healthcare (2015) *Understanding the role and use of essential medicines lists*. New Jersey, USA.

Johnson, K, Kennedy,C and Murdoch, I. (2014).The cost-effectiveness of technology transfer using telemedicine. *Health Policy and Planning*, Vol. 19, No.5.

Kar, S.S, Pradhan, H.S,Mohanta, G.P. (2010) Concept of essential medicines and rational use in public health. *Indian J Commun Med: Off Publ Indian Assoc Prevent Soc Med*. 35(1), 10.

Kasuko, T.G. (2015). The definition of an "Employee" under labour legislation: An Elusive concept. *A dissertation submitted at the University of South Africa for the requirement of the degree of Master of Laws-with specialization in commercial law*.

Laufman,H.(2022). Are engineers unsung heroes of medical progress?: The historic bond between physics, engineering and medicine. *Biomed Instrum Technol* Vol. 36, No. 5, pp. 325-334.

Licombe,Lucy C.(2018).Examining the impact of Training and Development on employees performance in public sector. A case of Tanzania telecommunication (TTCL).*Master's thesis*, The open University of Tanzania.

Li R, Ruiz, F, Culyer, A.J, Chalkidou K, Hofman, K.J. (2017). Evidence informed capacity building for setting health priorities in low- and middle-income countries: a framework and recommendations for further research. *F1000Research* 6, 231.

MacQuilkan K, Baker P, Downey L et al. (2018) Strengthening health technology assessment systems in the global south: a comparative analysis of the HTA journeys of China, India and South Africa. *Global Health Action*. 11(1),

1527556.

Marckmann G. & Goodman K.W. (2006). Introduction: Ethics of Information Technology in Health Care. *Journal of International review of information technology*, 5(2), 5.

Mills A, et al., (2012). Progress towards universal coverage: the health systems of Ghana, South Africa and Tanzania. *Health Policy and Planning*, 27:4-12.

Macha J, et al.,(2014). Determinants of community health fund membership in Tanzania: a mixed methods analysis. *Health Services Research*, 14(1):538.

MoHCDGEC (2017) *The National Health Policy 2017* (Draft). Dar es Salaam, The United Republic of Tanzania.

MoHCDGEC (2017).*Standard operating procedure for reviewing the standard treatment guidelines and the national essential medicines list of Tanzania*. Dar es Salaam: The United Republic of Tanzania.

MoHaSW (2007). *National Health Policy* .Dar es Salaam, The United Republic of Tanzania.

MoHaSW (2015). *Health sector strategic plan IV*. Dar es Salaam, The United Republic of Tanzania.

Mori,A.T,Macha E, Surgey G.(2018).*Policy and political environment for health technology assessment in Tanzania*. Johannesburg: PRICELESS South Africa.

Mori, A.T, Kaale, E.A, Ngalesoni, F, Norheim, O.F, Robberstad, B. (2014). The role of evidence in the decision-making process of selecting essential medicines in developing countries: the case of Tanzania. *PLoS One*. 9(1), e84824.

Ochalek, J, Revill P, Manthalu, G. et al,. (2018). Supporting the development of a health benefits package in Malawi. *BMJ Global Health*. 3(2).

Omachonu, V.K. & Einspruch, N.G.(2010). Innovation in healthcare delivery systems: a conceptual framework. *The Innovation Journal: The Public Sector Innovation Journal, 15(1), Article 2.*

Richards, T. (2018). China to set the bar high for new health technologies 2018. Available at: https://blogs.bmj.com/bmj/2018/11/06/tessarichards-chinabar-high-new-health-technologies/ (accessed 1 December 2018).

Rodrigues, R. J. (2020). Telemedicine and the transformation of healthcare practice in the informationage. In: Speakers' Book of the InternationalTelecommunication Union (ITU) Telecom Americas2020; Telecom Development Symposium, SessionTDS.2; Rio de Janeiro, April 10-15, 2020, pp 91-105.

Sandelowski, M. (2000). Focus on research methods: Whatever happened to qualitative description? *Res Nurs Health.* 23, 334–340.

Shekelle, P.G., Morton, S.C. & Keeler, E.B.(2006). *Costs and Benefits of Health Information Technology*. Evidence Report/Technology Assessment No. 132, Southern California Evidence-based Practice Center, Santa Monica, CA, USA; Rockville, MD: Agency for Healthcare Research and Quality (AHRQ) publishing; April (NO: 06-E006).

Surgey, G, Chalkidou, K, Reuben, W, Suleman F, Miot J, Hofman ,K. (2019). Introducing health technology assessment in Tanzania. *International Journal of Technology Assessment in Health Care* 1–7. https://doi.org/10.1017/S0266462319000588

Surgey, G, Mori A, Macha, E, Hofman K. (2018). *Competence and experience of the Tanzanian health technology assessment committee.* Johannesburg: PRICELESS South Africa.

The Danish National Board of Health (1996). *National strategy for health technology assessment.* Copenhagen, Denmark.

Van den Bent, M.J, Klein, M, Smits. M et al. (2018). Bevacizumab and temozolomide in patients with first recurrence of WHO grade II and III glioma, without 1p/19q co-deletion (TAVAREC): a randomised controlled phase 2 EORTC trial. *Lancet Oncol*. 19(9), 1170–9.

Watson, 2003. The future role of diagnostic testing. Management Informer, International Hospital Federation. Retrieved from: http://www.hospitalmanagement.net/informer/management/diagnostics1/index.html

WHO, (2014). E-Health for Health-care Delivery:Strategy 2004-2007. Geneva: WHO

Retrieved from:www.who.int/eht/en/EHT_strategy_2014-2017.pdf.

UN. (2019). *Revision* of *World Population Prospects.* Department of Economic and Social Affairs of the United Nations Secretariat.

World Health Organization (2014). Noncommunicable diseases country profiles 2014.

World Health Organization (2002). *Promoting rational use of medicines: core components (No. WHO/EDM/2002.3).* Geneva: World Health Organization.

WHO Regional Office for Europe, (1991). *Health for All Targets: The Health Policy for Europe.* Copenhagen, Denmark.