



THE EFFECT OF KNOWLEDGE AUDIT AND KNOWLEDGE MANAGEMENT SYSTEMS ON HUMAN CAPITAL IN HUMANITARIAN NON-GOVERNMENTAL ORGANISATIONS IN NAIROBI COUNTY, KENYA

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ABSTRACT

Globally, the growing shortage of human capital accompanied by an ageing workforce, frequent staff turnover and effects of Corona Virus Disease (Covid-19) posed serious challenges to humanitarian NGOs. There is a possibility of knowledge risks and shortage of knowledge workers. Knowledge loss and skills deficiency has created a necessity to adopt knowledge management strategies in order to sustain and mitigate the constant exodus of highly skilled and competent workforce. The study examined the influence of Knowledge audit and knowledge management systems on human capital management in humanitarian NGOs in Nairobi County. The study adopted descriptive research design in order to provide a detailed and accurate data. The population of the study comprised eighty (80) humanitarian NGOs operating in Nairobi County as indicated by the Register of NGOs Board of 2019/2020. There was no sample size therefore; the census approach was used since the population was very small. The unit of analysis was humanitarian NGOs while the unit of observation was knowledge managers and key personnel in charge of knowledge management. A questionnaire was the main data collection instrument and was distributed to Knowledge Managers and key personnel in charge of KM in humanitarian NGOs in Nairobi County. Regression model analysis was used to examine and test the relationships between the variables. Data was cleaned, coded and entered into SPSS for both descriptive and inferential statistics to determine the level of knowledge management strategies on human capital management in humanitarian NGOs in Nairobi County in Kenya. A regression model was used to determine the relationship between the variables under study, data that was collected and fed into Statistical Package for Social Sciences (SPSS) software for analysis. Data were analyzed in the form of descriptive statistics as well as inferential statistics (Pearson product-moment correlation, and regression analysis). The data was analyzed and presented in tables. The response rate of the study was at ninety five percent (95%). The findings indicated that knowledge audit and knowledge management system have a positive relationship with human capital management in humanitarian NGO's in Nairobi County. The study recommended that humanitarian NGO's in Nairobi County should embrace knowledge management strategies to improve capacity development, knowledge retention and efficiency.

Keyword; Knowledge Audit, Knowledge Management Systems, Human Capital Management

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INTRODUCTION

Knowledge management (KM) and human capital management has become crucial in addressing today's competitive, uncertain, rapidly and the new breed of challenges that weaken in achieving Sustainable Development Goals (SDGs) (Chigada & Ngulube, 2015). Emerging disruptive technologies in the context of Artificial Intelligence (AI) and Internet of Things (IoT) has changed how knowledge is being managed and knowledge management system has opened approaches to foster knowledge flows (Santoro et al., 2018). Human capital management has emerged as a foremost critical knowledge asset and a key driver for innovation and competitive advantage in the 21st knowledge economy (Liebowitz, 2018 & Sohel-Uz-Zaman et al., 2019). Managing and applying knowledge effectively is therefore, vital for both individuals and humanitarian NGOs to take full advantage of the valuable human capital management.

Persistent adaptation to changing working conditions due to COVID-19 and staff turnover provides an opportunity for knowledge management to capture critical knowledge and opportunities for staff capacity development (Kuruba, 2019). The tsunami of baby boomer's departures has created an urgent need to capture, share and transfer knowledge to the next generation (Leonard-Barton, Swap, & Barton, 2015). Although several NGOs are taking proactive steps to address their knowledge management needs, many do not have a formal knowledge retention strategy as part of their human capital management approach to address transitioning of next generation workforce, therefore establishing a CoP within organization is a great success to mitigate knowledge loss (Armstrong & Brown, 2019).

Strong strategic human capital management approaches can dramatically strengthen succession pipelines, reduce staff turnover and mitigate organizational knowledge risks. It is not possible to effectively address human capital management needs in the knowledge-based economy without measuring efficiency (Drábek, Lorincová &

Javorčíková, 2017). Liebowitz (2018) affirms that NGOs are using knowledge management on human capital management to: increase efficiency, developing corporate memory, improve both internal and external efficiency, and help in becoming adaptive and agile organizations. The ability of the NGOs to achieve SDGs is therefore, firmly rooted at the heart of knowledge management and managing organizational knowledge has become of great concern which many humanitarian NGOs have executed knowledge management strategies by investing on human capital management (Mahajan, 2016).

The US bilateral programs in countries have established sustainable learning and knowledge sharing programs through creation of CoPs for capturing and sharing tacit knowledge on sustainable development projects, tackle social challenges and foster innovation through knowledge exchange. Sullivan et al. (2015) affirms that global agencies like the USAID in Kenya has established CoPs as their knowledge management strategy which provides an avenue for collaboration between the partner agencies, national government, county government and humanitarian NGOs to discuss matters on social issues in order to development competencies of its knowledge workers to execute sustainable development projects.

The wealth of knowledge and know-how that resides in staff is recognized as a most important asset among the international development organizations. USAID has developed a Virtual Leadership Development Program CoP to enhance capacity development of leadership and management, while Knowledge Gateways to increase universal health care and WASH programs. Dumitriu (2016) affirms that knowledge sharing practices in the UN agencies has contribute to human capital management by enhancing organizational efficiency, knowledge workers are able to identify the right knowledge and expertise through CoPs, respond to emerging issues, capture tacit knowledge which is difficult to imitate, and

finally prevention of previous mistakes and duplication of efforts in the organization.

Human capital management is an economic asset and of great value to the modern organization; however, it is too often neither recognized nor managed adequately (Powell, 2020). The major challenge facing developed countries is absence of clear knowledge management succession pathways especially within humanitarian NGOs. Nnadozie (2016) disputes that the brain drain “knowledge bleed”, skills gap and lack of mentorship program is affecting Africa’s economy, more than 20,000 African experts leave Africa yearly as projected in the report analysis from the IOM. However, currently, sub-Saharan Africa lags behind in utilizing its human capital management due the imminent disruption to occupations, knowledge and skills brought about by the disruption in the Fourth Industrial Revolution (World Economic Forum, 2017).

In South Africa, the e-Thekwini Municipality since 2005 realized that valuable knowledge generated at the city was lost when staff turnover occurred which resulted into project failure. The city developed knowledge management strategy known as “City 2 City” interventions where expertise with the local residence participated in a joint project, collaborative partnership and internal e-Thekwini virtual CoP was developed to support knowledge sharing, documentation of best practices and lessons learned.” (e-Thekwini knowledge strategy and implementation plan, 2010-2014).

In the East African Region, knowledge management strategy has become vital in developing knowledge workers’ competencies which is the backbone of the nation (Chigada, 2015). Paradis (2016) confirmed that NGOs like the Lake Victoria Basin Commission and Southern Africa Health Community have implemented knowledge management strategies such as Net-Mapping tool used to capture and share stories, foster knowledge sharing, and connect knowledge workers implementing development projects in Kenya and Tanzania.

In the past decade, Kenya like any other regions in East African has not integrated knowledge management strategy with organizational human capital management needs. Knowledge management strategies and human capital management is not leveraged effectively since Kenya lags behind developed nations in executing KM (Ondari-Okemwa and Gretchen Smith, 2014). At the national level, the World Bank Group together with the Council of Governors has implemented knowledge sharing and learning strategies to foster Knowledge Capture and sharing within counties, humanitarian NGOs and development sectors operating in various county governments.

Few humanitarian NGOs, such as CARE International Kenya has fully embraced knowledge management strategies to address challenges they have experienced in implementing projects effectively. It is noted that some NGO’s have failed to meet donor expectations which has resulted into funding reduction and some cases donors have completely stopped funding the projects (Omondi & Muthimi, 2019). The main donors such as the Global Fund and Center for Disease Control have shifted their funding to other NGOs. Since the year 2012-2017, funding from Canada and other International organizations has decreased by an average of 17% from \$33.6M to \$5.7M (Omondi & Muthimi, 2019).

Statement of the Problem

Globally, the growing shortage of human capital accompanied by an ageing workforce, frequent staff turnover and effects of Corona Virus Disease (Covid-19) poses serious challenges to humanitarian NGOs, there is a possibility of knowledge risks and shortage of employees whereby 77% of the CEOs interviewed by PwC saw human capital as the biggest threat (Colnar, Dimovski, & Bogataj, 2019). In South Africa, 6% of the national knowledge loss and skills deficiency has created a necessity to adopt knowledge management strategy in order to sustain and mitigate the constant exodus of highly skilled and competent workforce (Govender, Perumal & Perumal, 2018). MasterCard foundation

has created Alumni Networks in Ghana, Rwanda and Uganda to support human capital management.

In Kenya, the World Bank UN agencies and humanitarian NGOs have invested on virtual Communities of Practice to address complex problems which require tacit knowledge (Fallah & Addai, 2017). Despite KM being recognized among NGOs, knowledge audit revealed that, little or no emphasis has been enforced on human capital, there is no systematic knowledge management strategies among humanitarian NGOs in Kenya to address this, on few cases there is an evidence of knowledge management practices isolated, undocumented and inaccessible (Ndiege & Wamuyu, 2019).

It is observed that NGOs in Kenya captures only 58% of its tacit knowledge and 30% of the Human Resources Managers cited incompetent skilled workforce as the major hindrance on project sustainability and innovations (World Economic Forum, 2017). Human capital management is not valued in most organizations and more so in humanitarian NGOs, it is attributed to the notion that tacit knowledge is complex and therefore not manageable (Onyancha, Mungai, & Kemoni, 2019), consequently this has resulted to project failures, donors withdrawal and funding reduction by 40% over the past 10 years at CARE International Kenya (Omondi & Muthimi, 2019). COVID-19 pandemic has demonstrated no exception; there is unexpected loss of a critical knowledge expertise leading to widening knowledge gap and skills among humanitarian NGOs.

Wanga (2020) observed that knowledge capturing and sharing of lessons learned among the workforce is essential in addressing human capital management challenges associated with COVID-19 which is crucial in achieving the Big Four Agenda and 2030 SDGs on economic growth in Kenya. Even though some humanitarian NGOs have executed knowledge management strategies, there is no conclusive empirical evidence on the effect of knowledge management strategies on human capital management in Kenya's context. It is against

this background that the study sought to establish the correlation between knowledge audit and knowledge management strategies and human capital management in humanitarian NGOs in Nairobi County.

Objectives of the Study

This study was guided by the following objectives.

- To examine the effect of knowledge audit on human capital management in humanitarian NGOs in Nairobi County
- To determine the role of knowledge management systems on human capital management in humanitarian NGOs in Nairobi County

LITERATURE REVIEW

Knowledge Management Capability Assessment

Tool (Model)

Knowledge Management Capability Assessment Tool (KM CAT) model was developed by APQC, it provides techniques to measure and evaluate organizational KM competencies. KM CAT is a collaborative benchmarking tool which focuses on organizational functionality in terms of how leadership develops competencies of its workforce and uses SWOT analysis to identify critical knowledge (Mungai, 2014). Kapofu (2014) recommended that KM CAT is an ideal model for evaluating processes, mapping out existence of knowledge assets in the organization and designing KM systems. Therefore, KM CAT is an analytical assessment tool which was applicable to the current study in assessing how knowledge audit contributed to human capital management in humanitarian NGOs in Nairobi County.

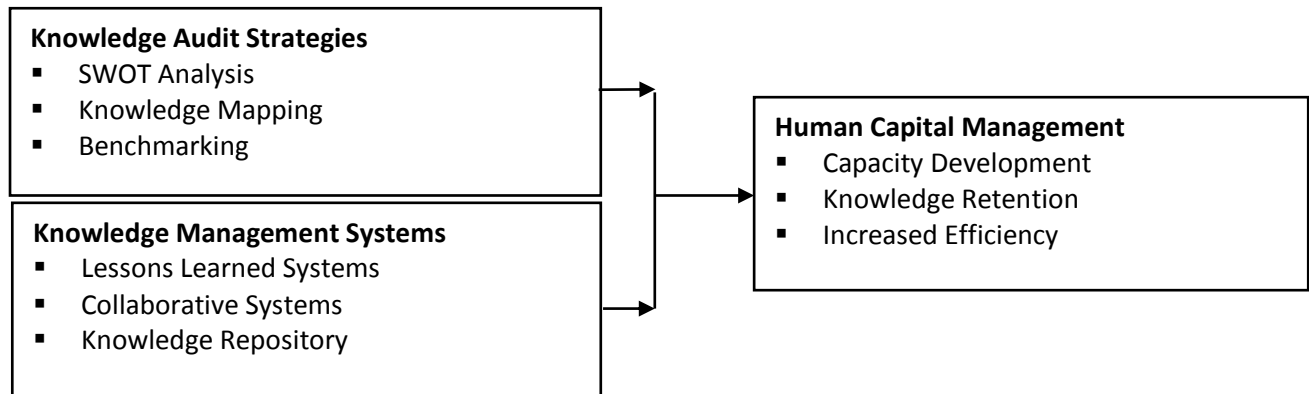
Human Capital Theory

The notion of human capital theory was originally proposed by Prahalad and Hamel (2017), they view human capital as the rational combination of numerous resources and know-how which is the foundation of an organizational sustainability. This theory sees human capital as the most valuable knowledge asset to the point that it makes the NGOs to be more sustainable (Murray, 2016).

Garavan, McCarthy and Carbery (2017) further explains that the human capital theories associated with knowledge management, the theory considers tacit knowledge as an asset which is the main source of competitive advantage and project sustainability in NGOs.

Murray (2016) confirms those knowledge management strategies in NGOs warrants

Knowledge Capture and sharing which in turn impacts organizational performance, innovations, personal development and knowledge retention. This denotes that successful knowledge management strategies in NGOs ensures proper knowledge acquisition, sharing and growth of human capital which in turn improves employee's performance and ensure knowledge retention.



Independent Variable

Dependent Variable

Figure 1: Conceptual Framework

Empirical Review

Knowledge auditing helps the humanitarian NGOs to understand which knowledge is required, where that knowledge can be accessed and how can it be used in the present events. In an empirical study carried out by Renata (2018) on knowledge audit, the results shows that knowledge audit focuses on people and the relationships between them such as behavior of people associated with knowledge creation, sharing and application this governs knowledge transfer systems to ensure there is no knowledge loss.

Hashemi (2019) carried out a study on using SWOT analysis for the codification of knowledge management strategy, the findings indicates that the corporation of Shouder Faucet has been able to mitigate the identified knowledge risks through making use of its strengths by fostering knowledge transfer among employees and preserving documenting their explicit knowledge in their website. Therefore, this study assumes that Knowledge Audit helps in identifying knowledge

strengths and gaps which helps the organization to mitigate knowledge loss and ensure their knowledge retention in humanitarian NGOs in Kenya.

Iskandar et al. (2017) conducted a literature review by analyzing 54 articles based on the current issues on knowledge management systems and future research, the findings revealed that Knowledge management technologies captures knowledge, analyses, manages, transfers, and shares knowledge and experiences of employees within humanitarian NGOs. Based on other empirical literature reviews, ICTs is described as a system which facilities knowledge capture, knowledge acquisition, knowledge transfer, and reuse of both tacit and explicit knowledge which enables knowledge management systems become productive in managing organizational knowledge assets (Nainar, 2016).

ICTs enable NGOs to retain tacit knowledge when staff turnover occurs (Costa & Monteiro, 2016). The

finding shows that knowledge management systems have influence on capacity development and knowledge retention. Santoro et al. (2018), conducted a study on the Internet of Things (IoT) in building knowledge management systems for knowledge management open innovation and knowledge management capacity, the findings indicated that knowledge management systems facilitates creation of open and collaborative ecosystems which enhances internal and external flow of knowledge which increases innovation capacity.

METHODOLOGY

The study adopted a descriptive research design with both qualitative and quantitative approaches. The target population of this study comprised of 80 humanitarian NGOs with multi-sectorial interventions located in Nairobi County as indicated by Register of NGOs-Coordination Board of 2019/2020. There was no sampling in this study since the study focused only on 80 humanitarian NGOs in Nairobi County; therefore, the study adopted a census approach since the population was small. The study aimed to reach at least two managers within each organization, the knowledge managers and key personnel in charge of knowledge management. The study used questionnaires to collect data from the respondents. The structured (closed-ended) and unstructured (open-ended) questionnaires were used to get uniform responses from respondents. The reliability of the instruments was established using the Cronbach Alpha Coefficient tests. The Cronbach Alpha Coefficients for the questionnaires of employees was ($\alpha = 0.839$; $df = 9$), indicating high level of reliability. The researcher collected both quantitative and qualitative data which was analyzed using both descriptive and inferential statistics. The descriptive statistical tools helped the researcher to describe the data and determine the extent to be used. The Likert scale was used to

analyze the frequencies and percentages. The coded data was then fed into the IBM Statistical Packages for Social Sciences (IBM SPSS) Version 25 which generated the values of the coefficients in frequencies and percentages.. Multiple regression analysis was conducted in order to determine the relationship between the independent variables and human capital management.

FINDINGS

The sample size of the study was 80 knowledge management managers working in various humanitarian NGOs in Nairobi County. The researcher distributed 80 questionnaires out of which 76 questionnaires were completed and returned them to the researcher. Thus, the response rate was 95%. According to Bryman and Cramer (2017), a response rate that is above 50% is considered as adequate for data analysis and reporting, while a response rate that is above 70% is considered excellent. Hence, the response rate of this study was within the acceptable limits for drawing conclusions and making recommendations.

Descriptive Analysis

Knowledge Audit Strategies

The respondents were requested to indicate their level of agreement on various aspects of knowledge audit strategies practices and human capital. Responses were measured on a 5 - point Likert scale ranging from; 1 = strongly disagree to 5 = strongly agree. The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'neutral' has been taken to represent a statement neither agreed nor disagreed upon, equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' have been taken to represent statement agreed upon equivalent to a mean score of 3.5 to 5. The findings were as presented in Table 1.

Table 1: Knowledge Audit strategies

	1	2	3	4	5	Mean	Standard Deviation
Knowledge audit is used to evaluate organizational knowledge needs, identify knowledge gaps and deploying knowledge which has increased capacity development, knowledge retention and efficiency.	0.0	0.0	17.0	62.3	20.8	4.038	0.616
SWOT analysis is used to determine knowledge management systems required to measure and mitigate knowledge risks arising due to staff turnover, COVID-19 and Technological threads.	5.0	6.3	18.9	39.6	30.2	3.886	0.969
We acquire most of the knowledge, skills and expertise through Peer assistance, Communities of Practice and training.	1.9	15.1	22.6	35.8	24.5	3.660	1.068
The most critical knowledge that you need to do your work is located in the knowledge repository.	7.0	13.0	6.9	34.7	38.4	3.315	0.941
Knowledge mapping is used to identity knowledge sources, flows, critical knowledge and knowledge risks associated with staff turnover, knowledge hoarding and effects of COVID-19.	1.9	5.7	11.3	52.8	28.3	4.000	0.894
Benchmarking is used to identify core competencies and strategic knowledge that needs improvement.	0.0	0.0	3.8	7.5	62.3	4.113	0.694
The most critical knowledge that you need to do your work resides in people's heads (Tacit Knowledge).	0.0	0.0	15.1	64.2	20.8	4.057	0.599
Aggregate						4.010	0.767

The respondents were asked to indicate their responses on the effects of knowledge audit strategies on human capital management in humanitarian NGOs in Nairobi County. In the first place, the outcomes showed that majority of the respondents with a mean of 4.038, out of a score of 5.0, agreed with a statement that knowledge audit is used to evaluate organizational knowledge needs, identify knowledge gaps and deploying knowledge leading increased capacity development, knowledge retention and efficiency. The measure of dispersion around the mean of the statements was (0.616) which indicates that the responses were not varied.

Secondly, the results showed that majority of the respondents as indicated by a mean of 3.886, out of a score of 5.0, agreed that SWOT analysis is used to determine knowledge management systems required to measure and mitigate knowledge risks arising due to staff turnover, COVID-19 and Technological threads with a measure of dispersion

around the mean being (std. dv = 0.969) indicating that the responses were varied. Thirdly, the results showed that majority of respondents as indicated by the mean of 3.660, out of a score of 5.0, agreed with the statement that they acquire most of the knowledge, skills and expertise through peer assistance, CoPs and training. The findings showed that responses were varied as indicted by the standard deviation of 1.068.

In addition, majority of the respondents agreed, as shown by a mean of 3.315 out of a score of 5.0, with the statement that the most critical needed to do work is located in the Knowledge repository. The measure of dispersion around the mean on this item was 0.941 indicating that the responses were varied. Along with this, most respondents with a mean of 4.057, out of a score of 5.0, agreed that the most critical knowledge that you need to do your work resides in people's heads (tacit knowledge). A standard deviation of 0.599 indicates that the responses on this item were less varied.

Furthermore, majority of the respondents as indicated by the mean of 4.113, out of a score of 5.0, agreed that benchmarking was used to identify core competencies and strategic knowledge that needs improvement. The standard deviation of 0.694 denotes that there was variation. Therefore, based on the pattern of the responses, human capital management is an economic asset and of great value to the humanitarian NGOs; however, it is too often neither recognized nor managed

adequately, and this has resulted to project failures, donors' withdrawal and funding reduction.

Knowledge Management Systems

The respondents were requested to indicate their extent of agreement on various aspects of knowledge management systems and human capital management in humanitarian NGOs in Nairobi County. The results were as shown in Table 2.

Table 2: Knowledge Management Systems

	1	2	3	4	5	Mean	Standard Deviation
The organization has systems in place for capturing the critical knowledge and experience of employees.	0.0	15.1	3.8	34.0	47.2	4.132	0.051
Lessons Learned Systems are used to capture lessons learned from projects to avoid duplication of efforts and reduce costly errors.	0.0	15.1	9.4	34.0	41.5	4.018	0.059
After Action Reviews (AARs) are used to capture the knowledge gained from activities and projects which has increased efficiency and knowledge retention.	0.0	17.0	26.4	15.1	41.5	3.811	0.155
Virtual Communities of Practice provides ways to strengthen existing professional relationships, exchange learning experiences and knowledge between interested teams has improved staff capacity development.	0.0	13.2	11.3	32.1	43.4	4.056	0.040
There is an Alumni Employee Network which connects the current and former employees to share knowledge, know-how, lessons learned and capture the missed knowledge from previous employees.	5.7	13.2	18.9	18.9	43.4	3.754	0.280
Content Management Systems (CMS) allow staff to publish, update, and access information on organizational intranet which has contributed to knowledge retention.	3.8	2.0	15.0	41.5	37.7	3.532	0.942
Aggregate Score						3.888	0.254

The majority of the respondents indicated by a mean of 4.132 agreed that the organization has systems in place for capturing the critical knowledge and experience of employees. The measure of dispersion around the mean was 0.051 implying the responses were not varied. Secondly, the majority of the respondents with a mean of 4.056 agreed that virtual CoPs provides ways to

strengthen existing professional relationships; exchange learning experiences and knowledge between interested teams has improved capacity development, improved knowledge retention and increased efficiency. The standard deviation for this item was 0.040 and indication that the responses were not varied.

Secondly, a significant number of the respondents with a mean of 4.018 agreed that lessons learned systems are used to capture lessons learned from projects to avoid duplication of efforts and reduce costly errors. There was no variation in the responses as indicated by the standard deviation of 0.059, dispersion around the mean shows there was no variance. Thirdly, the respondents agreed (mean of 3.811) that after-action reviews (AARs) are used to capture the knowledge gained from activities and projects which has increased knowledge retention efficiency. The measure of dispersion around the mean was 0.155 indicating that the responses were not varied.

Moreover, the study sought to find out respondent views regarding an Alumni Employee Network which connects the current and former employees to share knowledge, know-how, lessons learned and capture the missed knowledge from previous employees, the responses indicated a mean for 3.754 and a standard deviation of 0.280 showing that majority agreed and the responses were not varied. Lastly, the respondents agreed with a mean of 3.532 on the statements that content

management systems (CMS) allows staff to publish, update, and access information on organizational intranet which has contributed to knowledge retention; the results were dispersed around the mean as shown by the standard deviation of 0.942. The average score of all the responses was 3.888 demonstrating that majority of the respondents agreed that knowledge management systems affect human capital management in humanitarian NGOs in Nairobi County. However, the responses were not varied as shown by the standard deviation of 0.254.

Human Capital Management

Human capital management in humanitarian NGOs in Nairobi County was measured through capacity development, knowledge retention and increased efficiency. The respondents were requested to indicate their level of agreement on various aspects of human capital management in humanitarian NGOs in Nairobi County. The results were as shown in Table 3.

Table 3: Human Capital Management

	1	2	3	4	5	Mean	Standard Deviation
Organization uses knowledge audit to identify and provides learning and career growth opportunities which have increased the overall level of staff competencies and project efficiency.	4.0	15.1	3.8	30.0	47.2	4.212	0.051
Investing on human capital management through training and mentorship programs has reduced employee turnover rate, cost reduction of hiring and training of new staff.	5.0	15.1	7.4	31.0	41.5	4.118	0.059
Critical knowledge from employees leaving the organization is retained through Mentorship and learning from leavers program has increased competency development, project efficiency and Knowledge Retention.	0.0	17.0	26.4	15.1	41.5	3.786	0.155
The organization has a knowledge management succession planning to capture and transfer critical knowledge from employees.	3.0	10.2	11.3	34.1	41.4	4.124	0.040
Aggregate Score						4.06	0.076

From the results, majority of the respondents with a mean of 4.212 agreed that organization uses knowledge audit to identify and provide learning and career growth opportunities leads to increased level of overall staff competencies and project efficiency. The standard deviation was 0.051 denoting that responses were not varied. The study sought to find out if investing on human capital management through training and mentorship programs has reduced employee turnover rate and cost reduction of hiring and training of new staff, from the findings, majority agreed with a mean of 4.118. Besides, from the responses there was no variance as shown by the standard deviation of 0.059.

In addition, the researcher sought to examine whether critical knowledge from employees leaving the organization is retained through mentorship and learning from leavers program has increased

competency development, knowledge retention and project efficiency, from the findings, respondents agreed as shown with a mean of 3.786. The measure of dispersion around the mean was 0.155, indicating that there was no variation in the responses. Finally, majority of the respondents agreed that the organization has a knowledge management succession planning to capture and transfer critical knowledge from employees; this is indicated by a mean of 4.124. The measure of dispersion near the mean of the statements was 0.040 indicating that there was no variance in responses.

Inferential Statistics

Relationship between Knowledge Management Strategies and Human Capital Management

Correlation analysis was used to test the relationships between knowledge management strategies and human capital management.

Table 4: Correlations Coefficient

		Human Capital Management	Knowledge Audit	Knowledge Management Systems
Human Capital Management	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	76		
Knowledge Audit	Pearson Correlation	.788**	1	
	Sig. (2-tailed)	.001		
	N	76	76	
Knowledge Management System	Pearson Correlation	.807**	.293	1
	Sig. (2-tailed)	.000	.083	

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

The results revealed that knowledge audit strategies and human capital management in humanitarian NGOs in Nairobi County were positively associated ($r=0.788$, $p\text{-value}=0.001$). The association was significant since the $p\text{-value}$ (0.001) was less than the significant level 0.05. The results concurred with the findings of Durst and Zieba (2019) assert that Knowledge Audit helps the organizations to audit prospective knowledge risks which organizations might face, these include: knowledge loss which occurs when organization losses crucial knowledge as a result of staff

turnover, employee exiting the organization, talent poaching or technical faults.

In addition, results revealed that knowledge management systems and human capital management in humanitarian NGOs in Nairobi County, Kenya were positively associated ($r=0.807$, $p\text{-value}=0.000$). The association was significant since the $p\text{-value}$ (0.000) was less than the significant level 0.05. The results concur with the findings of Becerra-Fernandez and Sabherwal (2015) on knowledge sharing systems which include knowledge acquisition systems, knowledge capture

systems, knowledge sharing systems and knowledge retention systems.

Effect of Knowledge Management Strategies on Human Capital Management

The study computed multiple regression analysis to test the influence of knowledge management strategies on human capital management. The

study investigated the association between the response and the predictor variables.

Model Summary

The study made use of R^2 (coefficient of determination). R^2 was applied in measuring the proportion of variation in the response variable as a result of change in the predictor variable.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870a	.757	.704	.0261

- a) Predictors:(Constant), knowledge audit, knowledge management systems.
- b) Dependent Variable: Human capital management in humanitarian NGOs.

The independent variables reported an R-value of 0.87, indicating that there is a strong relationship between a dependent variable and independent variables. The adjusted R square is the coefficient of determination. From the findings the value was 0.704 which means that 70.4% variation in knowledge management strategies in humanitarian NGOs in Nairobi County can be explained by knowledge audit and knowledge management systems. The remaining 29.6% suggest there were other factors not included in this study that can be used to explain variation in knowledge management strategies in humanitarian NGOs in Nairobi County.

Beta Coefficients of the Study Variables

The research used a multiple regression model. From the coefficient's findings, the fitted regression equation was;
The regression equation was;

$$Y = 0.264 + 0.325X_1 + 0.277X_2$$

The results revealed that knowledge audit has a positive and significant influence on human capital management in Humanitarian NGO's ($\beta_1=0.325$, p value= 0.000). The p-value (0.000) was less than the significant level 0.05 hence making the relationship significant. This implies that a unit increase in knowledge audit leads to 0.325 increase in human

capital management in humanitarian NGO's. These findings concur with the findings of Hashemi (2019) who carried out a study on using SWOT analysis for the codification of knowledge management strategy, the findings indicate that the corporation of Shoulder Faucet has been able to mitigate the identified knowledge risks through making use of its strengths by fostering knowledge transfer among employees and preserving documenting their explicit knowledge in their website.

Further, the results revealed that knowledge management system has a positive and significant effect on human capital management in humanitarian NGO's. ($\beta_1=0.277$, p value= 0.003). The p-value (0.003) was less than the significant level 0.05 hence making the relationship significant. This indicates that a unit increase in knowledge management systems led to 0.277 increase in a capital management in humanitarian NGO's. These findings concur with the findings of Iskandar et al. (2017) who conducted a literature review by analyzing 54 articles based on the current issues on knowledge management systems and future research, the findings revealed that Knowledge management technologies captures knowledge, analyses, manages, transfers, and shares knowledge and experiences of employees within humanitarian NGOs.

Table 6: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.264	0.041		6.195	.000
Knowledge Audit	0.325	0.055	0.314	5.727	.000
Knowledge Management System	0.277	0.076	0.286	4.536	.003

a) Predictors: (Constant), knowledge audit and knowledge management systems.

b) Dependent variable: Human capital management in humanitarian NGOs.

Analysis of Variance

Analysis of variance was used to test the significance of the model developed. F-test was applied in determining how fit the model; the model was considered significant if the F-calculated

value was greater than the F-critical value. Also, the significance level of the model was tested at 5% level of significance. The results were as presented in table 7.

Table 7: ANOVA

Mod	Sum of Squares	df	Mean Square	F	Sig.
Regression	47.7062	2	23.8531	130.4161	.000 ^b
1 Residual	13.3517	73	0.1829		
Total	61.0579	75			

a. Dependent Variable: Human capital management

b. Predictors: (Constant), knowledge audit and knowledge management systems.

The significance value was 0.000 that is less than 0.05; thus, the model is statistically significant in predicting human capital management in humanitarian NGOs using knowledge audit and knowledge management systems. The F critical at 5% level of significance was 3.1221. Since F calculated from the ANOVA table was 130.4161, which is higher than the F critical (value = 3.1221), it showed that the overall model was significant. The study, therefore, established that; knowledge audit and knowledge management systems were all essential aspects influencing human capital management in humanitarian NGOs in Nairobi County.

CONCLUSIONS AND RECOMMENDATIONS

The findings revealed that SWOT analysis is used to determine knowledge management systems required to measure and mitigate knowledge risks arising due to staff turnover, COVID-19 and Technological threads. This implied that SWOT analysis, knowledge mapping and benchmarking leads to improvement on human capital management in humanitarian NGOs in Nairobi

County. The study also concluded that knowledge management systems have a positive and significant effect on the human capital management in humanitarian NGO's in Nairobi County. Findings revealed that virtual Communities of Practice provides ways to strengthen existing professional relationships, exchange learning experiences and knowledge between interested teams has improved staff capacity development. This indicated that improvement in organizations knowledge management systems (lessons learned systems, collaborative systems, and knowledge repository) leads to higher retention of knowledge and increased efficiency in humanitarian NGOs in Nairobi County in Kenya.

The study recommended that in order to ensure that humanitarian NGO's in Nairobi County has better knowledge audit strategies; they should focus more on knowledge mapping, SWOT analysis and benchmarking to identify core competencies and strategic knowledge that needs improvement.

Concerning knowledge management systems, there is a need for humanitarian NGOs to always set aside

a substantial part of their resources for Knowledge Management Systems. This is because Content Management Systems (CMS) allow staff to publish, update, and access information on organizational intranet which has contributed to knowledge

retention. There is also a need to implement knowledge management succession pathways in humanitarian NGOs to address knowledge risks such as staff turnover, skills gap and knowledge loss.

REFERENCES

- Adom, Dickson, & Hussein. (2018). Theoretical and Conceptual Framework: Mandatory Ingredients of a Quality Research. *International Journal of Scientific Research*, 7(1), 438-441.
- Armstrong, M., & Brown, D. (2019). Strategic Human Resource Management: Back to the future. Retrieved (July 19, 2020) from <https://www.employmentstudies.co.uk/resource/strategic-human-resource-management-back-future>.
- Becerra-Fernandez, I., & Sabherwal, R. (2015). *Knowledge management: Systems and processes*.
- Colnar, S., Dimovski, V., & Bogataj, D. (2019). Knowledge management and the sustainable development of social work. *Sustainability*, 11(22), 1-20.
- Costa & Monteiro. (2016). Knowledge Processes, Absorptive Capacity and Innovation: A Mediation Analysis. *Knowledge and Process Management*, 23(3), 207-21.
- Chigada, J., & Ngulube, P. (2015). Knowledge management practices at selected banks in South Africa. *South African Journal of Information Management* 17(1).
- Dumitriu, P. (2016). Knowledge Management in the United Nations System, JIU/REP/2016/10, Joint Inspection Unit, Geneva, Switzerland.
- Durst, S., & Zieba, M. (2019). *Mapping knowledge risks: towards a better understanding of knowledge management*. *Knowledge Management Research and Practice*, 17(1), 1-13.
- Fallah, N. & Addai, E. (2017). Creating a culture of knowledge exchange within and beyond UNICEF: Case of programme monitoring and response initiative Communities of Practice in development: a relic of the past or sign of the future? *Knowledge Management for Development Journal*, 13(3), 88-99.
- Garavan, T., McCarthy, A., & Carbery, R. (Eds.). (2017). *Handbook of International Human Resource Development: Context, Processes, and People*. Edward Elgar Publishing.
- Govender, L.N., Perumal, R. & Perumal, S. (2018). Knowledge management as a strategic tool for human resource management at higher education institutions', *South African Journal of Information Management*, 20(1), 966.
- Hashemi, M. (2019). Using the SWOT Approach for the Codification of Knowledge Management Strategy in the Shouder Faucets Corporation. *Revista Humanidades Inovação*, 6 (13), 294-301.
- Iskandar, K., Jambak, M. I., Kosala, R., & Prabowo, H. (2017). Current Issue on Knowledge Management System for future research: a Systematic Literature Review. *Procedia Computer Science*, (116), 68-80.
- Kapofu, D. (2014). Towards a knowledge management assessment tool: The operations management perspective. Hatfield: University of Hertfordshire, Hertfordshire Business School.
- Kuruba, M. (2019). People Management Challenges. In: Role Competency Matrix. Springer, Singapore.
- Leonard-Barton, D., Swap, W. C., & Barton, G. (2015). Critical knowledge transfer: Tools for managing your company's deep smarts.
- Liebowitz, J. (2004). *Addressing the Human Capital Crisis in the Federal Government: A Knowledge Management Perspective*, Butterworth-Heinemann/Elsevier, Boston, MA.

- Liebowitz, J. (2012). *Beyond knowledge management: What every leader should know*. Boca Raton, Fla: CRC Press.
- Murray, R. (2016). *Human capital and employee attitudes: An investigation of the antecedents of job satisfaction through organizational support and person-organization fit theory* (Doctoral dissertation). California State University, Fullerton.
- Nnadozie, E. (2016).ACBF, www.dailymaverick.co.za/(Accessed on November 1, 2019).
- Omondi, R. O., & Muthimi, J. (2019).Knowledge repository and program implementation at Care International, Kenya. *International Academic Journal of Human Resource and Business Administration*, 3(5), 53-66
- Ondari-Okemwa, Ezra. & Gretchen Smith, Janet. (2014).The role of Knowledge Management in enhancing government service-delivery in Kenya. *South African Journal of Libraries and Information Science*, 75(1), 28-39.
- Nainar, B. (2016).Effective application of knowledge management system for reverse center location problem, *2016 IEEE International Conference on Advances in Computer Applications (ICACA)*, Coimbatore, 304-307.
- Ndiege, J.R.A., & Wamuyu, P.K. (2019). Knowledge Management practices and Systems in county governments in developing countries: Perspectives from selected counties in Kenya. *VINE Journal of Information and Knowledge Management Systems*, 49 (3), 420-439.
- Paradis, J. (2016).A Growing Community for Knowledge Management in Africa.<https://www.k4health.org/blog/post/growing-community-knowledge-management-africa>. (Accessed October 10, 2019).
- Prahalad, C.K., & Hamel, Garry. (2017).*The Core Competence of the Corporation*. [London]: Routledge.
- Powell, T. (2020). *The Value of Knowledge: The Economics of Enterprise Knowledge and Intelligence*. Berlin; Boston: De Gruyter Saur.
- Santoro, Gabriele & Vrontis, Demetris & Thrassou, Alkis & Dezi, Lucas. (2018). "The Internet of Things: Building a Knowledge Management System for open innovation and Knowledge Management Capacity," *Technological Forecasting and Social Change*, Elsevier, 136(C), 347-354.
- Short, T. W. (2014). Workplace mentoring: an old idea with new meaning (part 1). *Development and Learning in Organizations*, 28(1), 8-11.
- Sohel-Uz-Zaman, A. S. M., Anjalin, U. and Khan, R. I.(2019). Human Capital Management: Understanding Its Implications over the Business, *International Journal of Economics, Finance and Management Sciences*, 7(5), 170-177.
- Sullivan, T. M., Limaye, R. J., Mitchell, V., D 'Adamo, M., & Baquet, Z. (2015). Leveraging the Power of Knowledge Management to Transform Global Health and Development. *Global health, science and practice*,3(2), 150-62.
- Wanga, J.(2020).China initiates knowledge-sharing in tackling Covid-19.People Reporter. <https://www.pd.co.ke/news/national/china-initiates-knowledge-sharing-in-tackling-COVID-19-29346> (Accessed March, 2020).
- World Economic Forum. (2017).The Future of Jobs and Skills in Africa Preparing the Region for the Fourth Industrial Revolution.<https://www.weforum.org/reports/the-future-of-jobs-and-skills-in-africa-preparing-the-region-for-the-fourth-industrial-revolution>(Accessed August, 2020).