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Determining the Human Resource Factors Influencing Strikes among Healthcare Workers in Public Hospitals in Nairobi County, Kenya

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Abstract

In Kenya, the Central Association of Trade Unions (COTU-K) has revealed that there has been an increase in labor cases and strikes. A majority of these cases involve the Union representatives and the public authorities. These strikes cause huge moral discussions, due to their capacity to hurt patients likedeterioration of health, an increase in mortality cases, or a complete shutdown of healthcare facilities. This research aimed to investigate thehuman resource factorsinfluencing strikes among Healthcare workers in public hospitals in Nairobi County, Kenya, and their effects on service delivery. The study adopted the descriptive research design, targeting healthcare workers at Mama Lucy Kibaki Hospital, Kenyatta National Teaching and Referral Hospital, Pumwani Maternity Hospital, Mbagathi Hospital, and Ngara Health Center. 400 participants were selected using Mugenda's (2003) formula. Data was collected using self-administered questionnaires and processed using the SPSS program, version 26.0, with the level of significance set at 0.05. Chi-square test statistics were employed and analyzed data presented both descriptively, and inferentially using tables.The study found that human resource factors which included staffing level of hospitals (p-value<0.001, $(\mathcal{X}^2(2, N = 346) = 35.031, \mathrm{p} - \mathrm{value} < 0.001)$ with OR = 4.875 and CI = (2.804, 8.475), overworking of HCWs/Heavy workloads $(\mathcal{X}^2(3, N = 346) = 31.244$, p-value<0.001) with OR = 0.344 and CI = (0.144, 0.824) and longer shifts $(\mathcal{X}^2(3, N = 346) = 36.614$, p-value<0.001) with OR = 0.669 and CI = (0.240, 1.864) had a significant effect on strikes by healthcare workers. The study further found that strikes affect service delivery in aspects such as putting patients at risk, a drop-in outpatient, evacuation of in-patients, jeopardizing of quality of services, destruction of hospital equipment, and in some cases, a complete shutdown of the hospital. The study recommends that the government should buffer the Health workforce through recruitment, training, and development to cater tothe shortages. Human resource departments should develop rotational duty Rota's, and assign manageable workloads to avoid longer shifts and burnout of the health workers.

Keywords: healthcare facility, human resource, industrial actions, service delivery, strike

Introduction

A strike is an employee's collective refusal to attend to their duties and responsibilities before certain demands and grievances are met by the employer. Most strikes and strike threats have the intention to push the employer to incur an expense for the business for neglecting to consent to an agreed benefit, wages, or working conditions demanded by the employee's association.

(Britannica, 2024). Industrial actions have usually previously occurred due to issues of wages or the conditions of the work environment. Healthcare workers (HCWs) strikes have turned into a universal issue with escalating challenges in many nations and the likelihood to influence adversely on the nature of healthcare services and the physician-patient relationship which depends on the guardian obligation of trust.

In Kenya, the principal association of workers (COTU-K) has revealed that there has been an increase in labor cases and strikes, mostly in the mid-21st era with a majority of these cases involving the representatives and the public authority (COTU-K, 2021). Human resource factors relate to aspects such as the number of HCWs and their skills which affect strikes, including issues such as overworking of the HCWs, long hours of work, and burnout. In the USA, strikes by HCWs have been experienced as recently as 2023 by HCWs represented by The Coalition of Kaiser Permanente Unions due to understaffing and heavy workloads especially due to COVID-19 effects (Brophyet al., 2023). In a South African study, Mudaly and Nkosi (2015) evaluated factors associated with nurses' go-slow in a select general hospital. The study found that nurses experienced increased workload and burnout due to shortages of nurses. Further, the study also demonstrated nurses endure long working hours.

Zboril-Benson (2012) evaluated why nurses called in sick in Canada. The study utilized a sample of 2000 nurses and identified fatigue related to work overload and longer shifts with no additional pay due to nurses' shortages as a leading cause of calling in sick at the workplace. Due to HCW shortages in Canada in 2023, it was found that HCWs logged in prolonged hours of extra time which was associated with their exhaustion leading to a go-slow (Duong & Vogel, 2023). Mwangiet al. (2018) conducted a study in Tanzania's pediatric clinic. The HCWs interviewed identified insufficiently trained staff, shortages of HCWs, and overworking led to a lack of job satisfaction and subsequently unrest in the health sector.

Methodology

This study employed a descriptive research design which helped to determine and describe the different human resource factors influencing strikes among healthcare workers in the public hospitals in Nairobi County, Kenya. The study was conducted at Mama Lucy Kibaki Hospital, Kenyatta National Teaching and Referral Hospital, Pumwani Maternity Hospital, Mbagathi Hospital, and Ngara Health Center. Mama Lucy Kibaki Hospital is situated in Umoja II Embakasi West Constituency along Kangundo Road, the facility has a workforce of about 468 staff, a bed capacity of 150 beds, and an average number of 800 patients attended to daily. Kenyatta National Teaching and Referral Hospitalis situatedin Upper Hill which is within a radius of about 2 kilometersin the Nairobi County Central Business District.KNTRH has a workforce of about 6,000 staff, and a bed capacity of 1,800, the average number of patients attended to daily is about 3,000 patients. Pumwani Maternity Hospital is situatedon General Waruingi Street in Pumwani locality, Kamukunji Constituency.

The facility has a workforce of about 206 staff and a bed capacity of 354 beds. The average number of patients attended to daily in the facility is 250 patients. Mbagathi Hospital is situated adjacent to Kenyatta market at Ngumo locality. The facility has a workforce of 200 staff, and a bed capacity of 320 beds. The average number of patients attended to daily is 500 patients. Ngara Health Centre is situated in Ngara, along Park Road near Guru Nanak Hospital in Starehe Constituency. The facility has 50 staff members, a bed capacity of about 24 beds, and a daily average of about 100 patients attended to daily.

A stratified random sampling technique was used to select 400 participants using Mugenda's (2003) formula. The researcher allocated weights to the various hospitals based on the proportion of healthcare workers in those facilities. The proportion of the sample size allocated for each hospital was based on the weights allocated.

Data was collected using self-administered questionnaires. To evaluate the factors that statistically had significant effects on strikes in public hospitals in Nairobi County, Chi-square test statistics were employed to test whether each of the categorical factors affected the frequency of strikes. The questionnaire data were entered into a computer using the Microsoft Excel program and processed using SPSS, version 26.0, software. Both descriptive and inferential statistics were employed in data analysis. The level of significance was set at 0.05.

Results

Socio-Demographic Characteristics of the Respondents

Data collected showed that most of the respondents were women as depicted by 55.2% (191). In terms of the age brackets of the participants in years, more than half of the total number of respondents with a percentage of 55.8% (193) fell into the age bracket of 31-40 years. The majority of the Health Care Workers with a percentage of 63.9% (221) indicated that they were married. Another majority of the participants with a percentage of 68.8% (238) revealed that they had attained a college level of education. According to the results, a total of 62.4% (355) indicated that they had worked in the respective healthcare facility for 6 or more years. Close to half of the participants, with a percentageof 49.1% (170) disclosed that they earned a salary ranging between KES 50, 000 to KES 100, 000 (see Table 1).

Table 1: Distribution of the Respondents by Different Socio-Demographic Characteristics

		Frequency	Percent (%)
Gender of the Respondents	Male	155	44.8%
	Female	191	55.2%
Age of the Respondents (years)	21-30 years	69	19.9%
	31-40 years	193	55.8%
	41-50 years	69	19.9%
	51-60 years	15	4.3%
Marital Status of the Respondents	Married	221	63.9%
	Single	105	30.3%
	Divorced	11	3.2%
	Widow/Widower	9	2.6%
Level of Education	College	238	68.8%
	University	108	31.2%
Number of years worked in the facility	0-5 years	130	37.6%
	6-10 years	103	29.8%
	11-15 years	68	19.7%
	16-20 years	26	7.5%
	21-25 years	15	4.3%
	26-30 years	4	1.2%
Gross salary range	>50, 000-100, 000	170	49.1%
	>100, 000-150, 000	69	19.9%
	>150, 000-200, 000	61	17.6%
	>200, 000-300, 000	46	13.3%
	Above 300, 000	0	0.0%

Human Resource Factors Influencing Strikes among Healthcare Workers in Public Hospitals in Nairobi County, Kenya.

The study evaluated human resource factors and their effect on strikes by HCWs in public hospitals of Nairobi County. Respondents were presented with a Linkert scaleand indicated how much they agreed or disagreed on some listed human resource factors and findings were tabulated in Table 2:

Table 2. Level of Agreement/Disagreement on Status of Human Resource Factors Influencing Strikes among Healthcare Workers in Public Hospitals of Nairobi County, Kenya.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The staffing level in this hospital is adequate	52 (15.0%)	223 (64.5)	58 (16.8%)	10 (2.9%)	3 (0.9%)
Existence of long working hours	6 (1.7%)	13 (3.8%)	80 (23.1%)	159 (46.0%)	88 (25.4%)
Overworking of HCWs/Heavy workloads	3 (0.9%)	19 (5.5%)	64 (18.5%)	173 (50.0%)	87 (25.1%)
Increased cases of burnout	6 (1.7%)	9 (2.6%)	39 (11.3%)	142 (41.0%)	150 (43.4%)
Longer shifts	5 (1.4%)	12 (3.5%)	142 (41.0%)	72 (20.8%)	115 (33.2%)
Insufficiently trained staff	9 (2.6%)	20 (5.8%)	145 (41.9%)	64 (18.5%)	108 (31.2%)

Table 2 shows that 79.5% (275) of the respondents disagreed that staffing levels of hospitals were adequate. From the findings, 71.4% (247) of the respondents were in agreement that there were long working hours. In terms of overworking of HCWs and heavy workloads in public hospitals of Nairobi County, 75.1% (260) were in agreement. A total of 84.4% (292) of the respondents were in agreement that there were increased cases of burnout. Additionally, 54.0% (187) of the respondents were in agreement that there were longer working shifts; 41.0% (142) were neutral. Lastly, 49.7% (172) were in agreement that there was insufficiently trained staff in public hospitals in Nairobi County; 41.9% (145) were neutral. Respondents also indicated how much they agreed/disagreed with some statements regarding the influence of human resource factors on strikes. The results are tabulated in Table 3.

Table 3: Likert Scale Responses on Influence of Human Resource Factors on Strikes among Healthcare Workers in Public Hospitals of Nairobi County

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Understaffing of HCWs has been one of the leading causes of strikes in public hospitals	9 (2.6%)	8 (2.3%)	99 (28.6%)	158 (45.7%)	72 (20.8%)
Long hours of work and shifts trigger strikes by HCWs	11 (3.2%)	17 (4.9%)	75 (21.7%)	157 (45.4%)	86 (24.9%)
Increased workload and burnout cause strikes by HCWs	10 (2.9%)	12 (3.5%)	38 (11.0%)	144 (41.6%)	142 (41.0%)

The findings from the table above (3) demonstrate that 66.5% (230) of the respondents are in agreement that understaffing of HCWs has been one of the leading causes of strikes in public hospitals. A further 70.3% (243) of the respondents were in agreement that long hours of work

and shifts trigger strikes by HCWs. Lastly, 82.6% (286) of the respondents were in agreement that increased workload and burnout causes strikes by HCWs.

Inferential Statistics on Human Resource Factors influencing Strikes among HCWs in Public Hospitals of Nairobi County, Kenya.

From the Chi-Square results in Table 4, the staffing level of hospitals is inadequate ($\mathcal{X}^2(2, N = 346) = 35.031, \text{p} - \text{value} < 0.001$) with OR = 4.875 and CI = (2.804, 8.475) with "Disagreement" as the baseline had a statistically significant effect on strikes by HCWs. Therefore, it is 4.875 times more likely for HCWs to engage in strikes if they perceive the staffing levels to be inadequate. Overworking of HCWs/Heavy workloads ($\mathcal{X}^2(3, N = 346) = 31.244$, p-value<0.001) with OR = 0.344 and CI = (0.144, 0.824) with "Disagreed" as the baseline had a statistically significant effect on strikes by HCWs. Therefore, it was 0.344 times more likely for HCWs to engage in strikes if they did not perceive the working hours to be long. Longer shifts ($\mathcal{X}^2(3, N = 346) = 36.614$, p-value<0.001) with OR = 0.669 and CI = (0.240, 1.864) with "Disagreed" as the baseline had a statistically significant effect on strikes by HCWs. It was therefore 0.669 times more likely for HCWs to engage in strikes is they perceived that the shifts were not long.

Table 1 Chi-Square Results on Human Resource Factors Affecting Strikes by HCWs in Nairobi County

		Frequency of strikes		
		Rarely occur	Frequently occur	p-value (Chi-Square)
Staffing Level of Hospitals is adequate	Strongly Disagree	9	43	**$\mathcal{X}^2(2, N = 346) = 36.479$, p-value<0.001; OR = 4.875: CI = (2.804, 8.475)**
	Disagree	46	177	
	Neutral	33	25	
	Agree	4	6	
	Strongly Agree	2	1	
Existence of long working hours	Strongly Disagree	1	5	$\mathcal{X}^2(4, N = 346 = 1.377$, p-value=0.848
	Disagree	3	10	
	Neutral	19	61	
	Agree	47	112	
	Strongly Agree	24	64	
Overworking of HCWs/Heavy workloads	Strongly Disagree	2	1	**$\mathcal{X}^2(4, N = 346) = 31.244$, p-value<0.001; OR = 0.344: CI = (0.144, 0.824)**
	Disagree	9	10	
	Neutral	31	33	
	Agree	41	132	
	Strongly Agree	11	76	
Increased cases of burnout	Strongly Disagree	1	5	$\mathcal{X}^2(4, N = 346) = 1.972$, P-Value=0.741
	Disagree	1	8	
	Neutral	11	28	
	Agree	37	105	
	Strongly Agree	44	106	
Longer shifts	Strongly Disagree	3	2	**$\mathcal{X}^2(4, N = 346) = 36.614$, p-value<0.001, OR = 0.669: CI = (0.240, 1.864)**
	Disagree	3	9	
	Neutral	61	81	
	Agree	8	64	
	Strongly Agree	19	96	

Note: Bold values represent significant human resource factors

Effects of Strikes on Service Delivery in Public Hospitals in Nairobi County, Kenya.
The study also evaluated the effects of strikes on service delivery in public hospitals in Nairobi County. Through Likert scale statements, respondents were required to indicate their level of agreement or disagreement on some statements regarding the effect of strikes on service delivery and findings tabulated in Table 5.

Table 5 Likert Scale Responses on Effects of Strikes on Service Delivery in Public Hospitals in Nairobi County

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Patients are put at risk	92 (26.6%)	28 (8.1%)	43 (12.4%)	65 (18.8%)	118 (34.1%)
The number of outpatients drops	61 (17.6%)	24 (6.9%)	41 (11.8%)	46 (13.3%)	174 (50.3%)
In-patients are evacuated	51 (14.7%)	35 (10.1%)	52 (15.0%)	65 (18.8%)	143 (41.3%)
Strikes generally jeopardize the quality of hospital services	64 (18.5%)	20 (5.8%)	35 (10.1%)	89 (25.7%)	138 (39.9%)
Few doctors are available for consultation	12 (3.5%)	10 (2.9%)	12 (3.5%)	52 (15.0%)	260 (75.1%)
Daily hospital duties are disrupted and medical equipment is put at risk of being destroyed	9 (2.6%)	5 (1.4%)	20 (5.8%)	53 (15.3%)	259 (74.9%)
There may be a complete shutdown of the hospital	27 (7.8%)	19 (5.5%)	34 (9.8%)	52 (15.0%)	214 (61.8%)

The results in Table 5 indicate that 52.9% (183) of the respondents were in agreement that patients are put at risk due to strikes by HCWs. Further, 63.6% (220) were in agreement that the number of outpatients drops. From the findings in Table 5.16, 60.1% (208) of the respondents were in agreement that in-patients are evacuated due to strikes. Also evident from the results is that 55.6% (227) of the respondents were in agreement that strikes generally jeopardize the quality of hospital services. The results further show that 90.1% (312) of the respondents were in agreement that few doctors are available for consultation due to strikes by HCWs. It is also notable from the findings that 90.2% (312) of the respondents were in agreement that daily hospital duties are disrupted and medical equipment is put at risk of being destroyed. Also notable is that 76.8% (266) of the respondents were in agreement that there may be a complete shutdown of the hospital due to strikes by HCWs.

Discussions
From the Chi-Square results in Table 4, the staffing level of hospitals, overworking of HCWs/Heavy workloads, and longer shifts had a statistically significant effect on strikes by HCWs. According to Brophyet al. (2022), human resource factors associated with strikes by HCWs relate to aspects such as the number of staffs which lead to effects such as overworking of the HCWs, long hours of work, and burnout. Strikes by HCWs in the USA are also associated with understaffing and heavy workload especially due effects of COVID-19.
In South Africa, Mudaly and Nkosi (2015) found that nurses in public hospitals engage in go-slow due to increased workload and burnout due to shortages in nurses. Further, South African nurses endure long hours of work which was also found to be a significant determinant of strikes. In Canada, nurses were found to call in sick due to fatigue as a result of work overload

and longer shifts with no extra pay. All these were found to arise from shortages in nurses (Zboril-Benson, 2012). Additionally, Duong and Vogel (2023) found that HCWs' shortages in Canada led to prolonged hours of extra time leading to exhaustion which resulted in go-slow by the nurses. In Tanzania, Mwangi et al. (2018) identified insufficient staff and overworking to lead to a lack of job satisfaction and subsequently unrest in the health sector.

Further, from the findings, the notable effects of strikes were putting the patients at risk, dropping in the number of outpatient clients, evacuation of patients, jeopardizing service quality, doctors' shortages, disruption of daily activities, putting at risk of medical equipment, and complete shutdown of hospitals. These results concur with Waithaka et al. (2020) who found that frequent HCW strikes led to the closure of hospitals thus preventing access to high-quality services by patients. According to On'gayoet al., (2019), strikes by HCWs led to a complete shutdown of hospital services which resulted in deaths and complications that would otherwise be avoidable. Patients also resort to medical tourism where they are evacuated to seek treatment in other countries.

Stoye and Warner (2023) noted that strikes affect service delivery by disrupting the healthcare system's operations. Patients are also discouraged from seeking services from public hospitals. Kim et al., (2020) noted that strikes involve work cessation or workers refusing to work or continue working. Strikes also involve work slowdown by employees which limits output. Further, through strikes, labor supply is withheld to pressure the employer to give in to the demands of the employees. Therefore, strikes in connection to HCWs potentially disrupt operations in hospitals which have serious repercussions for patients (Kim et al., 2020).

Conclusion

Based on the study's findings it can be concluded that strikes in public hospitals are frequent which affects service delivery in aspects such as patients being put at risk, drop in the number of outpatients, evacuation of patients, jeopardizing of hospital services, few doctors are available for consultation, disruption of daily duties in the hospitals, shutdown of hospitals and medical equipment are put at risk of being destroyed.It can also be concluded that there are human resource factors that have an influence on strikes by HCWs. Some of the human resource factors that have a significant effect on strikes include staffing levels, overworking/Heavy workloads, and longer shifts. The study recommends that the government should buffer the Health workforce through recruitment, training, and development to cater to the shortages. Human resource departments should develop rotational duty Rota's, and assign manageable workloads to avoid longer shifts and burnout of the health workers.

Ethical Considerations

The investigator was issued an approval letter for research from the Ethical Committee of Mount Kenya University, and the KNH-UoN Ethical Review Committee. Afterwards, a research permit was granted by Nairobi City County, and the National Commission for Science, Technology, and Innovation (NACOSTI) Kenya. Participation in the study was voluntary, and the participants signed an Informed consent after being briefed on the purpose, benefits, and risks behind the study before they agreed or declined to join. The identities of the participants were not revealed and any other identifiable data was not collected for confidentiality and anonymity reasons. Filled questionnaires were collected by the principal investigator and stored safely from unauthorized persons. The Manuscript was run using turn-it-in anti-plagiarism software to ensure that the research was free of plagiarism.

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