FACTORS ASSOCIATED WITH MOTIVATION OF HEALTHCARE WORKERS IN MAVOKO SUB-COUNTY, MACHAKOS COUNTY, KENYA

BY

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DECLARATION

Declaration by the Candidate

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DEDICATION

This work is lovingly dedicated to my incredible children, Austin and Amani. May your journey through life be filled with unwavering courage and authenticity. It is my heartfelt prayer that you surpass the limits of your own imagination and reach heights that you never deemed possible. Always remember that you are capable of making a profound impact on the world. You are enough.

ABSTRACT

Background: Healthcare workers (HCW) are the various cadres of qualified health professionals offering healthcare services. The healthcare system in Kenya faces critical human resources challenges for health demands like many other African countries. These include, among other things, acute shortages of essential cadres, unfavorable working conditions, and insufficient supply or nonexistence of necessary medical and non-medical equipment. Motivation is defined as an employee's degree of willingness towards achieving individual goals that are in line with the goals of the organization. Mavoko Sub-County has overstretched and inadequately equipped health facilities. These consequently affect the services quality and ultimately impede the realization of universal health coverage.

Objectives: To determine the sociodemographic, environmental, psychosocial, and health system factors associated with the motivation of HCWs in Mavoko Sub-County, Machakos County.

Methods: A cross-sectional study using qualitative and quantitative approaches was employed. The study population was all (n=168) HCWs working in eight healthcare facilities in Mavoko Sub-County. Questionnaires were utilized to collect quantitative and key informant interviews were utilized for qualitative data. Descriptive data were analyzed using frequencies, percentages, mean and range while qualitative data were analyzed thematically. Motivation factors were analyzed as Likert type data using frequencies. The relationship between the different factors with employee motivation was determined using the Chi Square test.

Results: A total of 108 completed the questionnaire. The mean age of the participants was 34 years with more females (55%) than males (45%). Those who reported being motivated were n=48 (45%) while n=40 (37%), were unmotivated. From the findings, n=102 (94%) of the HCWs had either moderate, severe, or extreme levels of job stress, and in 68% of the cases it was attributed to high workload. Motivation of HCWs was highly influenced by age (x^2=31.177, p=0.002). Environmental factors such as occupational health and safety (x^2=67.691, p=0.001) and health system factors including workplace policies (x^2=51.363, p=0.001) were strongly associated with motivation. Psychosocial factors, namely work-life balance (x^2=79.947, p=0.001), social support (x^2=100.538, p=0.001), as well as mental health and wellness (x^2=109.0, p=0.001) had a statistically significant association with motivation. The qualitative findings showed that workload and job stress contributed to healthcare workers' motivation.

Conclusion: Younger HCWs had higher levels of motivation compared to their older colleagues. Policies safeguarding health professionals in the workplace, sufficient medical supplies and equipment, timely payment of salaries, having good support structures and work-life balance were associated with higher motivation levels among HCWs, whereas gender and marital status were not significant determinants of motivation.

Recommendations: The National and County Governments Ministries of Health should prioritize mental health and wellness and reduce work stress among HCWs. The HCWs should have a healthy work-life balance, a safe working environment and foster good relationships with their supervisors.

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LIST OF ABBREVIATIONS AND ACRONYMS

CHMT	County Health Management Team
DHIS	District Health Information System
HCWs	Healthcare Workers
HRH	Human Resources for Health
MoH	Ministry of Health
NGOs	Non-Governmental Organizations
NHIF	National Health Insurance Fund
NHS	National Health Service (England)
SCHMT	Sub-County Health Management Team
SDGs	Strategic Development Goals
SMOH	Sub-County Medical Officer of Health
UHC	Universal Health Coverage
WHO	World Health Organization
WMI	Work Motivation Inventory

DEFINITION OF OPERATIONAL TERMS

Healthcare Workers (HCWs): A healthcare worker is one who delivers care and services to the sick and ailing (Joseph & Joseph, 2016). In this study this refers to the various carders of qualified health professionals offering healthcare services.

Motivation: This is described as the willingness an individual has towards exerting and sustaining effort towards reaching organizational goals (Lai, 2011).

Sociodemographic factors: These are factors that stem from inside the person and include sociodemographic traits such as age, gender, social status, level of education, culture and worker/client relationship (Warr, 2013). This study classifies needs motivation factors as sociodemographic factors as they revolve around intrinsic needs. Personal factors will also be categorized as sociodemographic factors in this study.

Health system factors: These are workplace characteristics and working conditions that are likely to influence workers' motivation and include factors such as workplace conditions, leadership, adequate staffing, and flexibility in working hours (Warr, 2013).

Environmental factors: These refer to the legal and political factors associated with the running of health facilities and include factors such as effective laws, input from stakeholders and favorable political climate (DuBrin, 2013). In this study, environmental factors are defined as external factors and encompass environmental aspects

such as climate change and occupational health and safety at the workplace.

Psychosocial factors: all ways that the environment and working conditions interact, organizational conditions, functions and content of the work, effort, the individual characteristics of workers as well as those of their family members (Vischer, 2008)

Health system: A Health system consists of all the organizations, institutions, resources and people whose primary purpose is to improve health (WHO, 2008).

Performance: Accomplishment of a given task measured against preset known standards of accuracy, completeness, cost and speed (Bierbusse & Siesfeld, 1997). In this study, performance is considered a measure of motivation.

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CHAPTER ONE

INTRODUCTION

1.0 Background Information

Human capital contributes a lot to the success of an organization. How other resources in an organization are used to meet the organizational goals depends largely on the human resources. In the health sector, human capital is a vital input (World Health Organization, 2000). However, despite the significance of human resources, there are various serious challenges faced by human resource management systems particularly in the developing countries (Oleribe *et al*, 2019). In the health sector, evidence suggests that the constant under-investment in human resource management and improvement could lead to the underperformance of health systems (Okoroafor *et al*, 2021). This therefore calls for reforms and investment in human resources in the health sector.

A key means of enhancing human resources is ensuring they are highly motivated. According to Ali and Anwar (2021), most organizations, companies and institutions are aware that it is vital to have not only highly skilled but also highly motivated employees in order to succeed. These highlight the fact that human capital is the starting point and an ongoing foundation of a successful institution or organization. In other words, the success of an organization no longer depends hugely on the capital or technology but more on the knowhow, expertise, and attitude of the employees. All these attributes can be improved in order to enhance employee motivation.

The World Health Organization (2013) estimated an overall global shortage of 17.4 million healthcare workers in 2013 and projected that the shortage could exceed 18 million workers by 2030. In Sub-Saharan Africa, regional disparities exist with approximately 140% growth required in the health labor force to overcome the deficit. In Kenya, the ratios for key health workers (doctors, clinical officers and

nurses/midwives) fall below the recommended WHO standards. As of 2015, the ratio in Kenya stood at 1:801 as compared to WHO recommendation of 1:667. This is evidenced by the numerous staff shortages witnessed in almost all departments in addition to the absenteeism of the available healthcare professionals.

Further, healthcare workers in Kenya continue to face many challenges especially after the new constitution was promulgated in 2010, which devolved the health services to the County Governments (Waithaka *et al*, 2020). Generally, remuneration of the health workers is low and often delayed, poor working conditions are evident, poor human resource management practices and procedures as well as poor policies for incentives. In fact, the health sector is one of the sectors that have suffered massive influence from either politics or strikes and demonstrations by the health professionals with their unions representing their grievances.

1.0.1 The Concept of Motivation

Motivation refers to an employee's degree of willingness towards achieving individual goals that are in line with the goals of the organization (Lai et al, 2011). Franco, Bennett and Kanfer (2002) define motivation as an internal psychological process that cannot be observed directly but only observable through motivation results such as improved performance or determinants of motivation. Employee motivation is vital and highly influences employees' performance. According to Gross, Ingerfurth and Willems (2021), employees are very crucial resources in any given firm or institution. It is therefore imperative to ensure they are highly motivated and satisfied in order to keep the organization or the institution in a competitive position. This calls for organizations to create conducive working environments and put in place policies that inspire employees.

The health sector is considered as one of the most labor- and capital-intensive sectors. This underscores the need to motivate workers in the healthcare sector in order to inspire good outcomes (Lagarde, Huicho & Papanicolas, 2019). They note a low motivated health workforce as a prerequisite for poor quality services and low retention in the workplace. They highlight that the quality, efficacy, efficiency, accessibility and viability of healthcare services are largely determined by the performance of healthcare professionals who are mandated to offer the respective services. In this regard, it is crucial to deliberate on motivation as a vital component in delivering health services.

Considering the specific features of health workers globally that are either intrinsic or extrinsic to their work and the challenges that exist in the health system, motivation is considered an integral component in addressing most of the compelling challenges existing in the health sector since it provides direction and purpose (Muthuri, Senkubuge & Hongoro, 2020). Consequently, research has focused on analyzing motivation scores, identifying health professionals' motivational factors, and understanding how managers and leaders may effectively encourage their staff while bearing in mind the diversity in this sector.

There are different factors that enhance employees' motivation. Valdez and Nichols (2013) in a study on motivational factors among healthcare professionals in Toronto, USA identified that social factors influence employee motivation. The study identified that social factors such as social exclusion led to isolation particularly during disease outbreaks such as severe acute respiratory syndrome (SARS) highly influenced the employees' motivation. The study also identified that legislative factors also barred the healthcare providers from working in various facilities thereby creating tight work schedules and financial hardships. As a result, conflicts occurred between the healthcare professionals in their role as healthcare providers and parents. These were cited as the

key sources of demotivation. They however established that various organizational factors such as provision of protective facilities, integration of technology in clinical practice and development programs such as trainings contribute to motivation among the health professionals and in turn inspire provision of healthcare services.

In another study done by Gunawan, Hariyati and Gayatri (2019) among nurses working in regional general hospitals in Indonesia, the findings indicated that the performance of nurses was related to various factors. The key factors reported included work motivation, length of work, and education level, whereby work motivation was the dominant variable affecting nurse performance. Based on these findings, hospital management need to create and improve the work motivation in order to improve the performance of nurses for improved quality of healthcare services.

Improved working conditions, higher pay and regulated working hours are key motivational factors among healthcare professionals in Europe. In the UK for instance, Lambert *et al.*, (2012) noted that a high number of healthcare professionals selected from the UK cited policy changes by the National Health System (NHS) of England as key motivators and were highly motivated by good working conditions, better pay and remuneration as well as good work life balance. Demotivation on the other hand was caused by social exclusion as a result of unsocial working hours and exclusion from family members (Lambert *et al.*, 2012).

In Asia, different development programs, training opportunities, living environment, benefits and income have been identified as key sources of staff motivation mainly in Japan and China (Millar *et al.,* 2017). Demotivation on the other hand was mainly caused by misalignment and inequity in financial rewards to the staff (Ma *et al.,* 2014; Hung *et al.,* 2013). In China for instance, He et al, (2020) identified that healthcare workers are mainly motivated by financial incentives, availability of career progression

opportunities, and proper job description and reform policies in the healthcare sector. In India, the key motivating factors included recognition and appreciation by the management, social support by family members, availability of training and development opportunities for the healthcare workers to enhance their skills, competitive salaries and remuneration, job security, opportunities for career progression and promotion among other factors (Davey et al, 2020).

Health professionals' motivation has also emerged as a key means of enhancing heath care services. The health systems in Africa are highly unresponsive, inefficient, inequitable and even unsafe regardless of the double burden of communicable and non-communicable diseases. The motivation of healthcare professionals has remained a key means of enhancing services quality (Medhanyie *et al.,* 2015). The healthcare professionals in various parts of the continent possess various features based on internal beliefs or those that are extrinsic to their work and at the same time face challenges that cannot been easily ignored. It is therefore necessary to understand the various motivational factors in various parts of the African continent in order to address numerous problems that obstruct service delivery among HCWs.

In studies conducted in South Africa, Nigeria, Tanzania and Ethiopia, the findings indicated that good monetary incentives are among the main motivational factors. This is the key reason why a significant number of public healthcare professionals join the private healthcare sector pursuing good and competitive monetary incentives (Ashmore, 2013; Blaauw *et al.,* 2013; Aduo-Adjei *et al.,* 2016; Weldegebriel *et al.,* 2016 & Kigwangalla, 2012).

In Ethiopia, research by Tegegne et al (2024) identified that healthcare workers were motivated by various factors including job security, training and development opportunities, availability of sufficient medical equipment, drugs and equipment, and

job satisfaction. However, workplace security emerged as the main motivating factor. With workplace security, the employees, information, and property are safe from both virtual and physical dangers. Violence at the workplace impedes job satisfaction and it is associated with poor motivation. Insecurity takes different forms from violence, sabotage, theft, data breaches, and cyberattacks among other problems.

In Uganda, Musinguzi et al (2018) concluded that healthcare workers are motivated by various factors. The research findings indicated leadership was a key motivating factor for the healthcare workers. Healthcare workers preferred transformational leaders as compared to transactional or laissez-faire. Transformational leadership was associated with job satisfaction, job commitment, motivation, and teamwork. Motivation of healthcare workers was higher in healthcare centers in which the leaders displayed idealized influence-behavior, and leaders who stimulated the healthcare workers intellectually. Motivation of healthcare works was negatively correlated with management by exception. Other factors that contributed to the motivation of healthcare workers included sufficient resource allocation, good relationships among colleagues, good relationship between the healthcare and the supervisors and the management, good communication between the healthcare workers and the management and co-workers' recognition and appreciation among other factors (Musinguzi et al, 2018).

In Tanzania, the available research indicates that motivation among the healthcare workers is generally low. According to Muthuri et al, (2020), a large number of healthcare workers in the healthcare sector at all levels are dissatisfied with their jobs and are poorly motivated. About half of the healthcare workers, including nurses, doctors, auxiliary clinical staff and support staff are dissatisfied with their jobs. This was mainly attributed to poor salaries and remuneration, insufficient resources and

equipment, insufficient consumables to make sure that the patients are properly taken care of, insufficient performance assessment and feedback, poor communication channels, and poor relationships among the healthcare workers and between the healthcare workers and the management. Other factors that demotivated the healthcare workers included lack of inclusion in decision making and disregard of the wellbeing of the healthcare workers by the management.

In Kenya, like most other healthcare systems in Africa, there are key human resource demands that the healthcare systems need to address in order to improve motivation of workers (Oleribe *et al*, 2019). The key challenges experienced in the Kenyan health system are inadequate essential cadres, persistent inability to attract and retain healthcare professionals, insufficient remuneration among cadres, poor working conditions, insufficient essential tools and medical supplies, unfair staff distribution, poor productivity among the healthcare professionals as well as poor governance and leadership (Kenya Human Resources for Health strategy 2014-2018).

As the Ministry of Health rolls out Universal Health Coverage (UHC), the workload of patients is expected to increase in the public health facilities (Cerf, 2021). The lack of commensurate increase in necessities in the healthcare sector including medical professionals and medical supplies in the face of these dynamics can lead to decreased motivation of HCWs in all cadres. This in turn will affect the quality of health services and impede the achievement of Vision 2030. It is worth noting that for the healthcare goals to be achieved, the healthcare professionals play a crucial role and hence the need to focus on the motivation among the HCWs in Kenya.

The World Health Organization estimates that about 44.5 healthcare workers per 10,000 populations are needed to ensure the Strategic Development Goals (SDGs) are met by 2030. These SDGs require enhancement in all the major health indicators for the

attainment of Goal 3: Good Health and Well-being. In Kenya, this figure is much lower at 13.8 healthcare workers per 10,000 population, which calls for urgent improvement measures (Kenya Health Work Force Report & MoH, 2015). Since devolution came into play, there has been increased workload in the public hospitals. This heightened demand for services has also partly been attributed to the abolishment of maternity fees in all public health facilities. Consequently, there is urgent need to look into the motivation of health professionals in order to improve performance in their services (Gitobu *et al.*, 2018).

The purpose of this study is to determine the factors that are associated with health workers' motivation in public health facilities in Mavoko Sub-County, Kenya. This will inform policy makers and healthcare managers on how best to motivate and retain the health work force, ultimately improving their performance with the aim of providing the highest attainable standards of health in line with country's health policy and strategic plans.

1.1 Statement of the problem

The motivation of healthcare workers is a critical determinant of the quality of healthcare services provided to the population. Healthcare workers face motivational challenges due to the presence of other income-generating activities such as private practice, agriculture, and small enterprise development. Despite ongoing reforms with policies and procedures aimed at guiding Kenya's health system, financial difficulties, corruption, and poor management of health facilities persist. Consequently, low pay, delayed salaries, inadequate manpower, and poor working conditions due to a lack of equipment and supplies like medicines have been noted to lower morale among healthcare sector workers (Mutsoli & Kiruthu, 2019).

The preference for urban areas by many health workers, due to opportunities in private practice, also complicates efforts to motivate those in more rural regions. Further, health facilities under the jurisdiction of County Governments are often poorly equipped and offer lower pay, making qualified professionals gravitate towards better-paying and well-equipped private health facilities. Additionally, healthcare professionals may opt to migrate to other countries that provide higher salaries and better quality of health services in pursuit of improved income and quality of life (Ministry of Health, 2015). This highlights the need for effective motivation policies as suggested by various theorists.

Kenya's different regions exhibit unique socio-economic conditions affecting the motivation and retention of healthcare workers. Cultural and geographical diversity across the country presents varying working conditions. Consequently, there is no comprehensive understanding of the motivational factors influencing healthcare workers in Kenya, which may impede the sector's ability to deliver high-quality and accessible healthcare. Healthcare workers in Machakos County have reported unmanageable workloads, lack of necessary equipment, job insecurity, unfair remuneration, intentions to leave their current jobs, and limited access to good schooling (Ojakaa et al., 2014).

Mavoko Subcounty, one of eight Subcounties in Machakos County, has distinct characteristics that influence healthcare worker motivation differently compared to other regions. Mavoko's proximity to Nairobi County, where HCWs prefer working due to better opportunities and pay, complicates efforts to motivate staff in underserved areas like Mavoko Sub County. Mavoko Subcounty has 168 HCWs in the public sector for a population of 154,427. This is below the national health workforce density of 13.8:10,000 population and the WHO recommendation of 44.5:10,000 population.

Thus, addressing human resources for health (HRH) is crucial to achieving Sustainable Development Goal 3: Good Health and Wellbeing (WHO, 2016).

As such, healthcare workers in Mavoko Subcounty face numerous challenges including resource constraints, high patient-to-staff ratios and limited professional development opportunities. Despite these hurdles, factors associated with the motivation of HCWs in this region remain under studied. Conducting a dedicated study in Mavoko ensures that the specific context and evolving dynamics of factors associated with the motivation of HCWs in this Subcounty are adequately understood and addressed

1.2 Study Justification

There are several critical factors that contribute to motivation and retention of HCWs that are not currently well understood in the Kenyan context (Ojakaa *et al.*, 2014). Without a clear understanding of the various factors that affect healthcare worker motivation and retention in different contexts, there will be continued compromise in accessibility and quality of healthcare in the county. This underpinned the need for this study in order to inform policy makers, health managers and other key stakeholders in matters pertaining to human resources for health (HRH).

The study is significant in several ways to the various stakeholders in the health sector. To begin with, the study will offer a profound understanding on the various factors that motivate healthcare workers. This will therefore inform the formulation of policies that increase motivation, development, and retention of HCWs, which will ultimately increase their performance and improve the quality of health service delivery. This especially in the face of devolution of health services and the rolling out of Universal Health Coverage (UHC) in Kenya in order to facilitate health system strengthening.

Secondly, the Ministry of Health (MoH) County Governments and the Government will all gain from the study. The findings of the study will help the Government through its efforts to enhance the health status of the people since the results will suggest actions that may be taken to increase the motivation of healthcare personnel and increase their efficiency and performance. The study offers recommendations to County Governments as well as measures that may need to be changed or implemented in order to boost health workers' motivation. This could help the County government and the Ministry of Health to design reforms that will help to enhance the performance of healthcare workers. Additionally, the study will offer healthcare professionals with information that can be utilized in self-appraisal.

Thirdly, other implementing partners like NGOs and donor agencies whose programs are health oriented will benefit from this study by revealing motivation levels of health workers. Since job performance relies on the motivation of healthcare workers, these health agencies can use the research results to develop policies aimed at catering for employees' motivation in their programs.

Besides informing policy making among healthcare systems, the findings will also shape decision making in other sectors by offering insights on the different determinants of employee motivation and recommend measures that can be taken to increase motivation and in turn improve performance in different sectors.

Furthermore, the study contributes to the existing corpus of knowledge. In this way, it will be a reference source for other researchers and scholars with interest in factors that motivate healthcare workers and workers in other sectors. The study also suggests gaps that can be addressed in a bid to advance research on employee motivation. This will help to advance the discourse on factors that influence motivation of workers.

1.3 Objectives

1.3.1 Broad Objective

To determine the factors associated with the motivation of HCWs in the public health facilities in Mavoko Sub-County, Kenya.

1.3.2 Specific Objectives

1. To determine the sociodemographic factors associated with the motivation of healthcare workers in these health facilities.
2. To examine the environmental factors associated with the motivation of these healthcare workers.
3. To identify the psychosocial factors associated with their motivation.
4. To assess the health system factors associated with the motivation of healthcare workers.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Status of Healthcare Workers' Motivation.

Healthcare providers are crucial resources that contribute to the attainment of the healthcare goals, provided they are offered appropriate chances and necessary conditions (Tajeu *et al.,* 2015). For the health system of a country to get a good standing, there is need to have employees who are focused and committed to the set healthcare goals and who have a strong desire to work deductively. These attributes are generated better through motivation. In acknowledgement of this, the health systems across the world now focus on how to motivate their staff through different methods. The policy makers, managers and administrators in the health sector focus on the employees' needs, expectations and desires in order to determine the changes that are essential in motivating the healthcare professionals.

In Poland, the available research shows that motivation factors influence the attitude of healthcare workers and the general performance of healthcare centers and hospitals. In the research done by Chmielewska et al (2020) in Poland, the findings indicated that among the numerous factors that influenced the motivation of healthcare workers, the key determinants of job satisfaction among the workers included job autonomy, respect among the co-workers, respectable social status, and quality of work. The key factors that demotivated the workers included poor income, lack of job security, and lack of recognition. The study confirmed that the success of the healthcare sector just like other sectors is pegged on the motivation of the workforce. In the case of the healthcare sector as was the case in this study, success of the healthcare units depends to a large extent on the dedication and commitment of the healthcare workers. For the workers to be committed and dedicated, they have to be motivated.

Based on the analysis, it emerged that high work efficiency is not only produced by motivation of the healthcare workers. There is a need for high management standards in order to make sure that the staff efforts are utilized as effectively as possible. The findings therefore confirmed that there was an interrelationship between work motivation of healthcare workers and the quality of management and supervision. The findings therefore acknowledged that there is a need to align the measures to drive healthcare workers' motivation with other management aspects. From correlation analysis, a strong relationship existed between motivation resulting from organizational factors and the mean rating of organizational performance, with the style and quality of management and supervision exercised. The findings therefore concluded that the HCWs were more inspired if they were more satisfied with supervision, rewards, training and development, and the career opportunities provided by the hospitals.

The analysis findings further confirmed that work motivation of healthcare workers was strongly correlated with performance feedback. The highest proportion of the respondents reported that they were least motivated by the performance feedback they received from the management of the hospitals. This indicated the need for the hospitals to introduce formal evaluation of the healthcare workers as a means of recognizing personal achievements of the healthcare workers. This could be done both at the departmental level and at the hospital level. The findings further indicated the variation in motivation between different categories of healthcare workers. Surgeons tended to be more dissatisfied with the most work aspects in the hospitals than the non-surgeons. This indicated the need for the programs meant to enhance motivation to be modified, putting that into consideration.

In Greece, Karaferis et al (2022) established that motivation among healthcare workers is influenced by various factors. The study identified that the staff in the healthcare sector are motivated by different factors and motivation varies among different groups of employees. The medical staff tended to have higher intrinsic motivation as compared to other professionals in the hospitals. The key motivators among the medical staff included satisfactory fees, training and development opportunities, availability of opportunities for new knowledge and skills, opportunities to partake in decision-making, job security, job safety and job tenure. Other motivators included promotion opportunities, availability of capacity building opportunities, good supervision and support from the management, good feedback, recognition for job achievements, flexible working hours, and incentives for the extra effort dedicated to work.

Motivation among the nurses was mainly influenced by satisfactory fees, availability of training and development opportunities, opportunities of skills and knowledge development, availability of promotion opportunities, feedback and appreciation for job achievements, opportunities to partake in decision making, support from the supervisors and management, capacity building opportunities, flexible working schedules and working hours and availability of incentives for extra hours dedicated to work. The other hospital staff other than the medical doctors and nurses were mainly motivated by good salaries, job security, availability of training and development opportunities, appreciation by the management and recognition, support and supervision from the senior management, availability of promotion opportunities, opportunities for initiatives and capacity building, inclusion in the decision making, flexible working schedules and incentives for extra effort dedicated to work.

In Ireland, the existing research shows that healthcare professionals are highly motivated through rewards and incentives. In a study conducted by Gherca (2021), the findings indicated that the healthcare workers are motivated by both monetary and non-monetary rewards. However, motivation was mostly as a result of non-monetary rewards as compared to monetary rewards. The non-monetary rewards were job security and recognition. Other non-monetary rewards included flexible working schedules, job satisfaction, and training. The monetary rewards identified as motivators included base salary, and payment for overtime hours worked.

In the Middle East, Daneshkohan (2015) in the analysis on the factors that affect job motivation among healthcare workers in Iran, the findings indicated that good management was the key motivating factor among the healthcare workers. This indicated that the HCWs were more inspired and had more positive attitudes towards the significance of management practices in the hospitals. However, the findings indicated that the management and leaderships skills of the supervisors were not sufficient which in turn contributed to demotivation of the healthcare workers. The respondents reported that there was a high occurrence of workplace conflicts among the nurses, and this was to some extent fueled by some managers' behavior. Some of the managers and supervisors mistreated the nurses and they failed to support and understand them. The management of the hospitals failed to understand that, even with sufficient resources, without proper management of the nurses, the hospitals could not do well. Effective management acts as a glue that holds together all the other internal components of the hospitals which in turn leads to a constructive work environment in which quality services are offered. This is because, when the healthcare workers are managed sensibly, they become satisfied, committed and motivated and they in turn offer quality services.

Besides the management, the study identified that support from the supervisors and managers and good relationship among workers contributed to motivation among healthcare workers. The study concluded that supportive managers constituted a crucial employee retention aspect. Motivation was higher among the healthcare workers who were provided with a clear sense of mission and vision by the management. The healthcare workers were more motivated if the managers and supervisors listened to them and recognized and valued them irrespective of their job positions.

Healthcare professionals' motivation is also a major issue in Asian countries. In Bangladesh for instance, poor staff motivation is mainly caused by poor pay and delayed salaries. This has affected the quality of services offered in the health sector (Darkwa *et al.*, 2015).

In China, low staff motivation among the healthcare workers is mainly attributed to misaligned incentives, heavy workloads, poor working conditions, as well as poor salaries and enumeration (Wu & Lam, 2016). Perceptions of inequality within the healthcare systems have also been cited to contribute to low morale among the health workers. As a response to this problem, there has been considerable improvement in the health system, which mainly focuses on strengthening human resources through an improvement of incentives and better pays (Zhang *et al.*, 2015).

In another study conducted in China by Li et al, (2019) on the factors that motivate motivation and performance of primary healthcare workers, the findings indicated that the key motivators of for the healthcare workers included career development and availability of financial incentives. Also, motivation among the healthcare workers was influenced by a balance between workload and remuneration offered. Regardless of the efforts of the government to improve the income of the healthcare workers, the divide

between the actual and expected income of the healthcare workers continued to widen as a result of the increasing cost of living and increased urbanization. The healthcare workers had challenges meeting the various human needs levels, which includes existence needs, relatedness needs and growth needs. This coupled with income insecurity contributed to low motivation and poor job outcomes. This created the need for policy makers to realize that healthcare workers have multiple needs that need to be met in order for them to be effectively motivated.

Research in India has demonstrated that health worker motivation is the primary factor influencing the performance HCWs. Although workers' skill and the availability of resources are important, they are insufficient. In addition to technical training, health workers require a work environment with incentives in place that reward high-quality performance. Therefore, a clear understanding of employee motivation and performance is important in order to design systems with the right incentives (Singh *et al*, 2019).

In Africa, the health systems are struggling to cope with various challenges such as severe staff shortage, low employee motivation, high absenteeism and underperformance, which threaten the achievement of the SDGs. While the health systems in the continent are affected by a myriad of factors, lack of motivation among the staff has been identified a key hindrance to the attainment of the healthcare goals (WHO, 2008). Besides great staff shortage experienced in the healthcare systems, there is also the challenge of weak institutional frameworks and distortive incentive structures, poor staff management structures, and poor working conditions. This has resulted in overburdened healthcare workers who are highly demotivated (Afulani *et al*, 2021). In response, different approaches have been generated and are being utilized with an aim to improve and strengthen the existing healthcare services in the continent.

Specifically, various strategies aiming at enhancing services and the performance of the healthcare workers through optimization of scarce resources available through effective human resource management.

Demotivation among the healthcare workers in Africa is caused by various factors. These range from lack of effective employee management systems to poor facilities and equipment. In research undertaken by Okafor et al (2022) to analyze motivation among healthcare workers in Western Nigeria, the findings indicated that motivation among healthcare workers is very low which has translated to poor service delivery. The challenge is worse among the physicians than other categories of workers particularly those who had not been in the profession for long. The key factors that cause low motivation included individual factors, managerial issues and lack of promotion opportunities. However, individual factors had the highest effect on motivation.

In another study conducted in Ghana, Buabeng and Adomah-Afari (2023) identified motivation and job satisfaction was low among healthcare workers at Korle-Bu Teaching Hospital. The study concluded that personal satisfaction, personal achievement, and incentives were the intrinsic factors that motivated the healthcare workers and their performance. The extrinsic motivators for healthcare workers included availability of adequate resources and equipment, good relationship with co-workers, job security, availability of recognition mechanisms and appraisal packages, competitive salaries and remuneration, and manageable workload that enabled them to have work life balance.

In a study conducted by Naher *et al* (2020) among doctors in different rural areas in South Africa, the major factors identified that caused demotivation among the doctors included inability to access online training courses and lack of promotional opportunities. Other factors highlighted by the doctors that reduced motivation included

insufficient and outdated medical supplies and equipment in clinics and hospitals. The doctors lamented that inadequate resources hinder them from accomplishing their jobs.

In Ethiopia, Adillo et al, (2020) analyzed the various factors that influence motivation among health extension workers and healthcare professionals in various regions. It emerged from the findings that over 60% of the healthcare workers and healthcare extension workers were highly motivated with their jobs. Motivation of the workers was mainly influenced by job titles, age, region posted, job satisfaction and availability of leave days. The motivation domains identified included effort in personal and altruistic goals, pride and personal satisfaction, and recognition in terms of management support and incentives. The study identified that there was a significant variation in the motivation of healthcare workers from one region to another. In Oromia and South Nations and Nationalities People's Region (SNNPR), personal and altruistic goals of healthcare workers were significantly lower among the healthcare workers as compared to the healthcare workers from the Amhara region. There was a strong relationship between job satisfaction and high efforts in altruistic and personal goals.

Motivation among the healthcare workers that resulted from personal satisfaction and pride was higher among healthcare workers who were older than 30 years as compared to the healthcare workers who were 24 years and younger. This was the case in South Ethiopia and Central Ethiopia in which age emerged as a significant determinant of motivation among the healthcare workers. Older healthcare workers were more motivated to do their jobs as compared to younger healthcare workers.

Support and recognition by the management were significantly low in Oromia and SNNPR and they contributed to low motivation among the healthcare workers. There was as a result of instability within the system and unavailability of capacity to supervise the healthcare professionals in larger geographical areas. Among the

healthcare workers who had increased average leave, recognition support was lower which explained the reason the healthcare workers who took more leave were less motivated. Among the healthcare providers, support and recognition was significantly higher as compared to the health extension workers. Workers who had more recognition in terms of incentives and managerial support were more motivated.

In Uganda, a study conducted by Chebet (2017) on motivation and the effects on the performance of healthcare workers at Kaproron Health Centre, the findings indicated that motivation of healthcare workers contributes to performance and quality healthcare services. The study concluded that provision of intrinsic and extrinsic benefits as well as both financial and non-financial rewards lead to increased productivity and improved service delivery. The Motivation was higher among healthcare workers who were offered better housing, better salaries and remuneration, leave days, and free medical services. Such factors improved the ability of the healthcare workers to offer their services in an effective manner. Also, the motivators facilitated hard work and commitment, proper time management and professionalism among the healthcare workers.

However, the study identified that generally, at the local level, the health sector was performing poorly as a result of poor motivation among the healthcare workers. Poor motivation was caused by poor salaries and remuneration, unmet allowances including transport and housing allowances, poor job security, poor and lack of incentives. Poor motivation was also attributed to lack of leave, lack of promotions, lack of health insurance and other factors. Regardless of the government's efforts to motivate the healthcare workers and to improve their attitudes towards their work and deliver better quality healthcare services, the efforts were hampered by widespread corruption, lack of professionalism and poor government funding among other challenges.

In another study by Scholastica (2018) on the factors that motivate healthcare workers in Jinja Referral Hospital and the influence on performance, the findings indicated that healthcare workers were motivated by various factors. According to the findings, the qualified healthcare workers are provided with attractive remuneration as per their education level and their job positions. These healthcare workers were more motivated and delivered better and quality services as compared to the healthcare professional workers who were not offered good remuneration. The healthcare workers who were offered high salaries and bonuses led to increased confidence. Additionally, motivation of healthcare workers was higher in healthcare centers that were provided with sufficient office spaces for the workers to undertake their jobs and obligations and they are able to attain their goals. Furthermore, the healthcare centers which were provided with sufficient tools and resources, staff performance was better, and the healthcare workers were more motivated as compared to the heath care centers, which did not have sufficient resources.

In Tanzania, the available research indicates that generally, motivation among the healthcare workers is low. In research conducted by Sato et al (2017) on motivation aspects among healthcare workers among primary level healthcare facilities in rural areas, the findings indicated that motivation among the healthcare workers was low. This was attributed to numerous factors that included poor salaries and remunerations, poor working environment, and lack of adequate facilities needed to undertake their jobs. In addition, low motivation among the healthcare workers was a result of poor job description. The majority the healthcare workers did not have well defined roles and responsibilities and this reduced confidence in their jobs. They reported that they were not provided with written job description by the medical officers in most cases, the job descriptions were provided verbally instead of writing. For the healthcare workers who

were given job description, they did not recognize them. In another research by Majidi *et al*, (2021) among healthcare practitioners in Tanzania, lack of promotion, poor remuneration and lack of employee appraisal systems were identified as major sources of demotivation among the nurses.

In Kenya, various factors have been identified as determinants of motivation of HCWs. In a study conducted by Nyaboga and Muathe (2022) on staff motivation and performance, the findings indicated that motivation of healthcare workers was caused by various factors which included career development opportunities, good payment, conducive working conditions, and job recognition. This in turn contributed to good job outcomes and quality service delivery. According to the findings, the healthcare workers who were offered sufficient remuneration were more motivated and offered better services as compared to the healthcare workers who were not provided proper remuneration. The study identified that the performance of healthcare personnel is significantly impacted by a progressive increase in basic pay, merit adjustments, and related benefits. Career development has a significant and beneficial impact on healthcare workers' motivation and performance. The career aspects that motivated the healthcare workers included training and development, progressive learning opportunities, and good interpersonal communication skills attained through training offered.

The healthcare workers' motivation was influenced by the working environment and healthcare workers. According to the findings, in hospitals with good working conditions, the healthcare workers were more motivated and performed better as compared to the hospitals with poor working conditions. Regarding recognition, recognition increased the retention rate of the workers, which in turn contributed to job engagement.

In another study, Momanyi et al (2016) analyzed how training and development motivate HCWs in Narok County and identified that motivation of healthcare workers varied greatly across different settings. The differences are attributed to the differences in the factors that contribute to motivation as well as the variations in the working environments in different hospitals. Health systems in different areas had different provisions, which explained the differences in the motivation among healthcare workers. Generally, the healthcare system in the County had average scores in provision of workers' motivators. Training was among the determinants of motivation of the HCWs. The majority of healthcare workers reported that they have received different forms of training within their facilities, and this contributed to motivation and job commitment. According to the findings, continuous training and development enables the healthcare workers to be up to date with the emerging trends in the healthcare and to get current insights into treatment and diagnosis.

2.2 Sociodemographic Factors Associated with Motivation of Healthcare Workers

Motivation to work, just like any psychological work reaction, stems from within and is hence influenced by sociodemographic factors. These factors fall into two categories: demographic variables and individual's cognition about their situation. Background factors comprise an employee's gender, age, skills and experience, social status, and knowledge among other sociodemographic traits (Warr, 2013).

The age of a health professional affects their work motivation differently leading to varying research results. According to Adamopoulos *et al*, (2022), the generational differences result in different perceptions, needs and values for healthcare workers and in turn different work motives and preferences especially regarding rewards (Von Bonsdorff, 2011). The current healthcare workforce hosts three generations, that is, the

Baby Boomers who were born between 1946 to 1964, Generation X who were born between 1965 and 1980 and the Millennials who were born between 1981 and 2000 (Adamopoulos *et al*, 2022). A study conducted by Lambrou*et al*., (2010), before the occurrence of the global economic crisis that occurred in 2008 demonstrated that the intrinsic motivation of health workers increases with age. Lambrou*et al*., (2010) reveals that younger and less tenured health professionals are more motivated externally through remuneration as compared to the aged and more tenured heath care professionals.

Yeung *et al* (2020) classified healthcare professionals drawn from New Zealand health sector into three categories depending on how their motivation is influenced by age. The veteran generation who was born before 1945 worked without questioning and were more solid. The baby boomers whom he classified as egocentric and workaholics, attention demanding and expect inclusion of their ideas and contribution in decision-making. Finally, Generation X who are classified as self-sufficient, loyal to themselves, fun-seeking, focus more on the results and do not care much about the process.

Currently, older and more experienced healthcare workers in Greece are inspired by financial rewards as compared to the younger health professionals who are employed on a temporary basis especially those less than 40 years (Gaki *et al*., 2013). Kantek *et al.,* (2015) reveals that younger and less tenured healthcare professionals from Turkish University Hospital are more after status and authority and they seek for more independent working. However, Von Bonsdorff (2011) disputes this and states that rewards and income are key motivating factors irrespective of the generation as they enable them to cater for different human needs. Gaki *et al*., (2013) however add that the preferences of type of reward are different; for instance, the millennials and

generation X prioritize premium pay and overtime while the Baby Boomers value pensions and retirement more.

Research by Sparks (2012) found out that older healthcare workers (Baby Boomers) are more satisfied with benefits offered at their workplace and have greater psychological empowerment, whereas younger healthcare workers are less satisfied with working conditions and extrinsic rewards. The research further adds that, the Generation X and the Baby Boomers have comparable sociodemographic determination and incentive scores, which are higher than those of Millennials. In addition, Generation X and Millennials showed higher stress level and greater plans to leave.

In addition to age, healthcare workers also value attained independence. That is, sovereign thoughts, decision authority, creativity which is related to longer years in service along which more experience and education are acquired (Koch *et al*., 2014). In addition, Gaki *et al*., (2013) found that this motivation factor was due to the fact that they attain higher competence and become self-confident which consequently increases their psychological empowerment. This contrasts motivational factors for beginners who seem to be motivated through the connections they have with relatives and express their safety as well as that of their patients as the most crucial factors to them. Similarly, beginners relate their stress and lack of confidence to inexperience in healthcare and underestimation by their colleagues who are more experienced

According to a study done in Finland by Von Bonsdorff (2011), health workers' preferences for their motivation can be affected by gender differences, needs and values. According to research conducted by Ayyash and Aljeesh (2011), male HCWs were more motivated by supervision, managerial support, appreciation and rewards, while motivation among female workers was mainly caused by non-monetary rewards.

In another study by Lambrou *et al*., (2010), the findings indicated that female workers were more motivated by remuneration as compared to the male workers.

Outside of the direct organizational environment, the person's motivational process is also determined by the wider cultural and social context. Health professionals and the patients are at the heart of the healthcare system. Members of the community have expectations with regard to service delivery and they also give feedback on the performance of the health workers either through formal or informal means

When a health worker's present position and workplace meets their needs connected to their profession and align with their own objectives and beliefs, it may be inspiring (Koch et al., 2014). Research conducted in general public hospitals in Cyprus has revealed that this could potentially explain why nurses who place a higher value on technical procedures have shown greater motivation when working in surgical units (Lambrou et al., 2010). Conversely, when working in intensive care units, higher motivation levels were demonstrated among nurses who appreciate decision-making authority and high degrees of environmental uncertainty. Furthermore, research has shown that autonomy mostly motivates nurses in leadership roles (Gaki et al., 2013), in addition to communication, morale, rewards, and recognition (Ayyash & Aljeesh, 2011).

According to Herzberg (2017) challenging work opportunities such as participation in interesting projects and jobs that have varying satisfaction levels influence motivation, as these impact different needs levels. This is what Parker (2014) refers to as advancement, a situation where employees feel that they are progressing in their career. Korda and Itani (2013) studied Britain's local authority health workers and how they were more likely to be motivated by their capacity to be engaged in planning, opportunities to innovate, decision-making inclusiveness and a feeling that anticipated

change was communicated to them. This is what Herzberg (2017) referred to as motivators and satisfiers, that is, needs that rank higher after the fulfilment of hygiene. In other words, self-actualization as explained in Maslow's hierarchy of needs.

Another employee need leading to motivation is promotion, whereby an employee is assigned a higher-level job within the same organization or what Parvin and Kabir (2011) referred to as being assigned a high status in the workplace as a result of being effective in working. Herzberg (2017) stated that promotion entails increased position, status and employees' remuneration and is regarded as a significant motivator. Promotion comes with increased pay leading to higher motivation. Wilensky (2015) argues that promotion decisions ought to be informed by an organization's internal and external policies as well as its personnel policy. Most of the time, promotion cannot be achieved just by heads of departments or the HR manager. Often, the directors and upper management make the final choice. Three things are expected to happen after a promotion in order to increase employee motivation, that is the individual will be given more challenging tasks than before and will need to make decisions about their work and other activities. To keep an employee motivated within the company, a promotion should also come with a compensation raise.

Training, which offers opportunities for growth and improves knowledge and abilities for effective development, is another need for employees (Kabir, 2011). Compared to unskilled workers, trained workers are happier and more motivated in their jobs (Abdullah & Djebavni, 2011). Employee growth is positively impacted by training programs, which are beneficial for competencies (Hunjira et al., 2010). Employees who participate in training programs are confident and perceive their organizations positively (Kabir, 2011).

Generally, the study was anchored on the five motivational needs as per the Work Motivation Inventory (WMI) 2000 update (Hall & Williams, 2000) and expanded upon in Calk and Patrick (2017). The WMI was initially created in 1967 and is based on Herzberg's (1959) Hygiene-Motivator Model of Satisfaction and Maslow's (1943) Hierarchy of Needs. According to Calk and Patrick (2017), it assesses the following five workplace motivational needs: fundamental, safety, belonging, ego-status, and actualization. These five needs were found to be a valid measure of the need's satisfaction of healthcare workers. Five Needs Satisfaction factors according to the Workplace Motivation Inventory are: basic needs, which are expressed as concerns for comfortable working conditions, more free time, opulent sociodemographic property, higher pay, and the avoidance of physical strain and discomfort; safety needs, which are expressed as concerns for safe working conditions, performance standards, and fringe benefits like insurance and retirement plans; belonging needs, which are expressed as concerns for amiable coworkers, opportunities for social interaction, and team membership; ego-status, which is expressed as concerns for opportunities for job advancement and recognition of performance; and actualization, which are expressed as concerns for more demanding and purposeful work that fosters creativity and leads to a sense of sociodemographic fulfillment.

While broader concepts of individual, organizational, and environmental work motivation factors covered previously apply to all countries social factors like culture will affect the relative importance of the different determinants described and the relationship between them. For instance, in most developed and industrialized nations, workers are mostly motivated by flat organizational structures and involvement. In societies characterized by hierarchical structures and that mostly legitimize uneven power distribution; these factors may be less important. Different cultural

circumstances, as those in India, will also cause the worker's conflicting requirements to be prioritized differently. Healthcare workers in India may have a greater need for social validation of their activities than supervisor approval in some situations due to their profound societal and community ties (Purohit & Bandyopadhyay, 2014).

Bardad and Katuse (2017) investigated the social factors influencing motivation and retention of HCWs in Mandera Referral Hospital in Kenya. Using a descriptive cross-sectional study, the targeted population comprised of nurses, clinical officers and doctors. The study found that majority of the HCWs in Mandera hospital were posted by the Kenyan Government from other regions while only a few hailed from the region and had requested the government to post them there so that they can be close to their families. On the social factors affecting motivation, most HCWs who were not from Mandera cited social exclusion by being separated from their social circles such as families and friends as a source of demotivation.

2.3 Health System Factors that Affect Motivation of Healthcare Workers

A health system is made up of individuals, institutions, groups, and resources whose main aim is to promote health (Malakoane et al, 2020). Six fundamental components make up the WHO Health Systems framework: service delivery, health workforce, health information systems, financing, medical products and technologies, leadership, and governance.

Previous research indicates that healthcare workers' motivation is also associated with health system factors such as working conditions and work-place characteristics (Warr, 2013). For effective implementation of an incentive system, there is need for healthcare organizations to make sure their workplaces respect the needs and preferences of the healthcare professionals. They should offer all the factors that ensure the heath workers are motivated and inspired to offer quality healthcare services.

Regarding the health system factors that leads to workers' motivation, there is a general and extensive consensus that in order to increase and sustain a more powerful intrinsic work motivation, there is need to bring up the workplace to the competence level of the worker and to enable them to utilize all their abilities (Awosusi & Jegede, 2011). Therefore, work autonomy with clear roles and responsibilities, recognition of work and accomplishments, effective open communication, an equal opportunity policy, support for career and development, membership in an effective team, and respect from coworkers and the community are the main health system factors that motivate healthcare workers. All these factors are crucial and contribute a lot in ensuring the health workers' needs for autonomy, competence and relatedness are satisfied (Ali & Anwar, 2021). This helps the workers experience the significance of their work, take sociodemographic responsibility for the consequences of their labor, and become aware of the results of their own actions. All of these things assist the workers reach individual self-actualization and achievement. Therefore, hospitals that provide opportunities for healthcare professionals to participate in decision-making and foster high-quality, open communication among them are considered to be of the highest caliber for drawing in, inspiring, and keeping healthcare workers (Ali & Anwar, 2021).

High intrinsic motivation has been linked with giving the healthcare workers autonomy to work and operate within their own responsibilities for Greek nurses (Gaki *et al*., 2013). In Central China, increased health professionals' motivation has been linked to respectful communication and relations in the workplace. In addition, the healthcare workers' engagement and empowerment ensure they are active both physically and verbally in multi-professional and functional teams.

Ayyash and Aljeesh (2011) conducted a study on nurses' motivation at European Gaza hospital in Gaza strip and established that professional learning and training programs

offered highly contributed to nurses' motivation. Such opportunities also enabled them to gain high competence, self-confidence and to attain more achievements in their practice. In fact, better learning and practice opportunities are among the key reasons why healthcare workers are constantly in search of improved incentives across the world.

Regarding working conditions, sufficient resources, conducive environments, efficient management of workload, adaptable work schedules, safety, and competitive salaries are perceived as key working conditions motivating aspects among healthcare professionals. In addition, healthcare workers' relocation to urban areas as well as to higher income countries have also been linked to better salaries, and better quality and security of sociodemographic life (International Council of Nurses, 2010). The findings indicated that basic human needs, sociodemographic safety and well-being always precede the care for others. Therefore, financial remuneration and job security are considered relatively vital in motivating healthcare workers (Komen *et al.,* 2018).

In Finland, Van Beek *et al.*, (2012) identified that staffing is linked to motivation among the healthcare professionals. This is because staff determine their workload and work intensity. In a study done in America, it emerged that working in a fixed schedule and flexible working hours influence staff motivation (Ayyash & Aljeesh, 2011).

Afolabi et al (2018) analyzed the influence of organizational factors in motivating healthcare workers in Europe, UK, Asia and Africa and concluded that organizational factors contribute to motivation of healthcare works and performance. The study concluded that, unless healthcare workers take motivation of healthcare workers seriously, efficient, effective and quality healthcare services cannot be provided. The study concluded that healthcare workers are not motivated by a single factor only; rather, they are motivated by a mixture of different factors that need to be put into

consideration within the cultural context of healthcare systems. In this study, it was concluded that the different motivators of healthcare workers included career development, favorable working environment, financial incentives, and good leadership and management techniques. The study concluded that offering the healthcare workers financial incentives only is not sufficient to motivate them. It emerged that appreciating and recognizing the healthcare workers is also crucial as this motivates them too. This was particularly the case for the healthcare workers posted in the rural settings.

In a research study done by Awosusi and Jegede (2011) in Ekiti state of Nigeria, the findings indicated that the level of motivation among the nurses was low, and this had negative effect on the job satisfaction and job performance. The study concluded that even best skilled and intrinsically motivated HCWs require effective support structures to sustain their motivation and capacity to provide high-quality services. The study recommended the need for the hospital management to enhance the working conditions of the healthcare workers by providing them with sufficient instruments and devices in order to protect themselves from hazards. Also, the study underscored the need for regular promotion of nurses and encourage them to pursue educational advancement in order boost their skills.

Weldegebriel (2016) conducted a study in Northwest Ethiopia to analyze motivation of health workers and the associated factors. Data was gathered from a sample of 304 health professionals. Among the different factors that impacted the workers' motivation, a conducive working environment with effective support structures was found to motivate the healthcare workers, which in turn led to good job outcomes. The availability of resources enabled the operations to run smoothly while management

support and ease of communication were found to be strong predictors of health worker motivation and performance.

Ojakaa *et al.,* (2014) analyzed factors influencing motivation of HCWs in three distinct regions in Kenya: remote Turkana region, relatively accessible Machakos region and Kibera slums. A sample of 404 healthcare workers selected from 59 health facilities was utilized. The findings indicated that inadequate facilities such as lack of electricity and hospital facilities for use by HCWs, transport and health facilities were sources of demotivation in the public health facilities. On the other hand, adequate training of HCWs, administration support and manageable workload were the main sources of motivation for workers selected from private hospitals.

2.4 Environmental Factors Associated with Motivation of Healthcare Workers

Environmental factors have a significant association with employee motivation. Environmental factors are classified as external factors including political, economic, social, technological, legal, and environmental influences, such as government policies, economic conditions, and climate change (Arfan, 2021). These factors are beyond direct control but still shape decisions and operations of an organization. Political factors, while external, significantly impact businesses, especially through regulations and policies related to the environment, trade, or labor laws. According to Jayaweera (2015), organizations should strive to offer a working environment that is acceptable and that does not impair the health and performance of its occupants. The morale and job productivity of healthcare workers can decrease as a result of poorly planned workplace environment which in turn leads to poor work results. In this regard, Occupational health and safety is key to ensure that healthcare professionals work in hazard-free environments in which their safety and welfare are well guaranteed.

In a study by Vanos *et al* (2021) on workplace heat stress, health and productivity in various countries affected by climate change, found that are two outcomes of climate change are reduced productivity in jobs involving heat exposure and more challenges in attaining economic and social development in nations impacted. A number of recent studies have analyzed the effects of heat exposure on productivity whereby it has been found that in indoor activities and exposure to heat impacts on performance (Fisk, 2000) and reduction of the humidity of office air in tropical areas was shown to improve the perception of the work environment.

Several studies have established that healthcare workers are motivated by certain environmental features, which are highly significant to their productivity and workspace satisfaction. Afolabi, Fernando and Bottiglieri (2018) conducted a study on the effect of organizational factors in motivating healthcare employees in the UK, Europe, Africa and Asia. The study focused on both the developing and the developed nations, which implies that the issue healthcare employee motivation is a global concern. From the analysis, the study established that working environment influences workers' motivation and the performance of heath care workers. One of the factors that were common in all the countries is that supportive leadership and management motivates the employees, which consequently improves their job outcomes. It was established that management openness promotes a conducive working environment, and this ultimately increases employees' job satisfaction and commitment. Moreover, the study concluded that poor working environment with conditions such as poor lighting, lack of electricity, lack of water, and lack of hospital facilities demoralized the healthcare workers and caused demotivation and poor outcomes.

Théoneste (2015) conducted a study to determine the influence of occupational health standards on employee motivation and job satisfaction among healthcare workers in

Kinihira Hospital in Rwanda and identified that motivation of healthcare workers was influenced to a large extent by the health and safety practices. The study identified that employee motivation and productivity was largely influenced by the safety practices, safety programmes the attitude of the management on the safety and health guidelines and practices and supervision of health and safety practices. The study concluded that if effectively managed, safety and health measures have a positive impact on the employee motivation. However, the existing health and safety measures at the hospitals were found to be inadequate, which indicated the need for the management of the hospitals to put in place effective and active health and safety committees. Also, the findings highlighted the need for the hospitals management to undertake regular monitoring and evaluation and continuous reviews of occupational health and safety.

Sato *et al.,* (2017) did research on aspects of motivation among health workers at primary level health facilities in rural Tanzania. The study was cross sectional in nature and involved the administration of a two-part questionnaire set in Kiswahili language. Multivariate regression analysis was then done to evaluate the simultaneous effects of factors on the outcomes of the motivation scores. Based on the analysis, the study established that maintenance of a conducive working environment is a key motivating factor among the healthcare professionals. For instance, the provision and maintenance of equipment in good condition enables the operations to run more smoothly and this motivates the heath care workers. Supportive management and leadership were also cited as key motivating factors among the healthcare workers.

Locally, Ojakaa, Olango, and Jarvis (2014) analyzed the factors that influence primary healthcare workers' motivation in three different locations. The study established that in regions with poor working conditions, the healthcare workers were highly demotivated and had high intentions to leave for other workplaces with better working

conditions. For instance, in hospitals in Turkana County, about 88 of the respondents reported that they were not contented with the working environment and had high intentions of leaving. Similarly, in Machakos, the healthcare workers felt that their working conditions were not conducive as compared to hospitals in other areas particularly in Nairobi. Some of the issues raised included poor salaries and remunerations, lack of hardship allowances, unsupportive management and leadership, poor energy supply, insufficient equipment, and poor housing.

2.5 Psychosocial Factors Associated with Motivation of healthcare Workers

Psychosocial factors are considered among the very relevant issues in the modern day and future societies. These factors include all interactions between the work environment, workplace settings, job functions, effort, and personal characteristics of employees as well as their families (Bashirian, 2020). The nature of the psychosocial factors is multifaceted and covers various issues related to the employees' thoughts and emotions, the general environment, and their work. The importance of psychosocial factors is premised on the importance of employee welfare and wellness as a vital aspect of workplace strategy. In the recent past, keen attention has been paid to the influence of psychosocial factors particularly among healthcare professionals as regards mental health issues resulting from a lack of work-life balance.

The six components of an employee's workplace welfare included a reasonable workload, personal control over their work, managerial support and colleagues, positive relationship at work, a relatively clear function, and a sense of control and participation in decision making on organizational affairs (Sitopu, Sitinjak & Marpaung, 2021). The relationship that employees have with their job is very important because it affects both how much stress they experience there and how well they are able to take responsibility for their work. The nature of work as well as the gradual deterioration or growth of job

satisfaction over time, are behavioral factors that may have an impact on employees' performance. Other factors can also affect how well employees perform. These include, but are not limited to, job congruity, leadership philosophies, and supervisor support (Kagwi, 2018).

The association of psychosocial factors on motivation of healthcare workers continues to receive key focus. In the recent past, various work-related factors associated with the wellbeing of healthcare workers have been evaluated. In research done by Roknabadi *et al*, (2022) on the correlates of medication error in hospitals, the findings established that various medication errors were associated with poor job security for nurses, heavy workloads and working overtime. In another study, Gangster and Rosen (2013) identified that the working conditions highly influence the stress level among the healthcare professionals as well as their physical health. Poor working conditions and high job stress were the main sources of poor outcomes among the health workers. Stress related working conditions, such as long working hours and overtimes, large number of patients, and poorly planned shift work could lead to psychosomatic health complaints among the healthcare workers, emotional exhaustion, and a high willingness to leave.

Goetz (2015) analyzed the effect of psychosocial factors on the well-being of practice assistants at work in general medical care in the German federal state of Baden-Wuerttemberg and identified that the psychosocial element that the health practice assistants scored best on was sense of community, while they scored lowest on influence at work. Furthermore, when compared to full-time employees, part-time healthcare assistants gave higher ratings for their psychosocial aspects at work and health-related results. There was a significant correlation between several psychosocial elements and socio-demographic characteristics, as demonstrated by the two measures

of health-related outcomes burnout and work satisfaction. Recent research has also introduced the idea of "total life space," which refers to employees' desire to be able to manage their obligations at work and at home. To achieve this, the idea is that employees want reasonable expectations at work that are not too much to an extent of interfering with the sociodemographic life either socially or at home (Kalimullah *et al*., 2010).

Aagestad (2014) conducted a study on psychosocial and organizational risk factors for doctor-certified sick leave, a prospective study of female health and social workers in Norway. The study established that exposure of the healthcare staff to stress, threats, and violence lowered motivation and resulted to poor work outcomes.

Asante (2019) did a study to determine the relationships between primary healthcare practitioners' quality of life, burnout, and psychosocial risk factors in the rural Chinese province of Guangdong. From the analysis, the study identified that psychosocial factors had significant effect on the quality of life of HCWs and this in turn influenced motivation and performance. The study identified that the work environment was very straining and demanding. As a result, the healthcare workers demonstrated poor life quality. High burnout prevalence was associated with poor life quality as well as psychological and physical health. This increased job dissatisfaction, low motivation and poor performance. Further the poor quality of life among the healthcare workers was attributed to poor salaries and remunerations. This in turn contributed to low motivation and poor performance.

In India, research conducted by Kumar et al (2018) on psychosocial factors and quality of life among healthcare workers in India, the findings indicated that the healthcare workers had average overall quality of life. In general, wellbeing of the healthcare workers, their recreational activities and leisure were average but interpersonal

relations, occupational activity and organizational activities were slightly below average for all the healthcare workers. There were occasional conflicts among the healthcare workers over decision-making, particularly in regard to patient related errors and unmet expectations from patient's caregivers which contributed to poor quality of life. This contributed to poor job satisfaction and low motivation.

The study concluded that occupational stress prevalence was mild among the majority of healthcare workers. However, the prevalence was high among some respondents. The occupational stress demotivated the healthcare workers leading to poor performance. In some instances, the demanding nature of the healthcare work forced the workers to compromise with family and other social activities and needs further contributing to stress levels at a personal front. In such cases, young age of some workers helped them to cope as well as family support.

Kyari et al (2021) conducted a study to analyse the psychologıcal factors among healthcare workers in a number of selected state hospitals in Yobe state in Nigeria. The analysis findings indicated that psychosocial factors are significant determinants of motivation and performance among the healthcare workers. Specifically, the study concluded that the availability of government incentives increased job commitment and motivation of the workers which in turn translated to good performance. The incentives reshaped the attitudes of the healthcare workers and their job outcomes as they were motivated and inspired to undertake their duties. The study recommended the need for the government and other non-governmental organisations to continue enhancing the rewards and incentives offered to the healthcare workers as a means of improving the delivery of healthcare services. Also, the study recommended the need for the hospitals' management to increase the frequency of the refresher training offered to the workers

as this would enable them acquire more skills and reshape their attitudes towards the patients and other staff in the healthcare institutions.

Madede et al (2017) conducted a study to determine how supportive supervision influences motivation and job satisfaction among healthcare workers in Mozambique and concluded that psychosocial factors contributed to high motivation among the HCWs. Specifically, the study concluded that motivation and job satisfaction improved as a result of good and supportive supervisors.

In Tanzania, Modest (2020) conducted a study to determine the factors that influence job satisfaction and motivation among healthcare workers in Tanzania focusing on Kilimanjaro Christian Medical Centre Referral Hospital. From the analysis, the study concluded that job satisfaction and motivation was moderate among the healthcare workers. Job satisfaction and motivation was mainly influenced by various factors including supervisory support, relationship among the employees, good salaries and remuneration, compensation plans, availability of training and development opportunities and career progression and advancement opportunities and the nature of work. The study recommended the need for the management of the hospitals to offer the healthcare workers opportunities to partake in decision making in order to make them more committed to the organisational goals. This would in turn increase motivation. The study highlighted the need for conducive working environment, improved supervisor support in order to increase employee motivation and performance. Regular increment of salaries was another area that the management of the hospitals needed to focus on in order to motivate the healthcare workers.

Locally, Bosire (2018) analyzed the influence of the working environment among doctors in public hospitals of Nairobi County. The study established that various workplace aspects had impact on the workers' motivation. The major workplace factors

reported were stress, anxiety and depression. These adversely affected the physicians' motivation and performance. In another study, Nyangori, et al (2019) analyzed job satisfaction and motivation among healthcare workers in a number of public hospitals in Trans-Nzoia County and identified that psychosocial factors contribute to job satisfaction and motivation of the healthcare workers. The study identified that job satisfaction and motivation was generally low among the healthcare workers.

The study also identified that job satisfaction and motivation varied among the healthcare workers whereby, higher levels were identified among radiologists and lower motivation and satisfaction levels recorded among the nurses. The study identified that job satisfaction and motivation were influenced by work environment. Also, the healthcare workers were motivated by good pay, fringe benefits, supervision, job evaluation, communication, contingent rewards, time off, training, competence of other staff members, and appreciation. Other factors that motivated the workers included equipment and resources, operating procedures, relationship with coworkers, proper ventilation and lighting, and nature of work.

In another study, Musangi et al, (2023) conducted a study to determine how employee motivation influence the performance of healthcare workers in level four hospitals in Kenya. The study concluded that motivation of healthcare workers is crucial as motivated healthcare workers offer quality healthcare services. However, the study concluded that the level of motivation among the employees was generally low. This was partly attributed to poor pay and remuneration. The health workers were only somewhat content with the salaries they got, and they felt they the pay did not match their expectations. According to the healthcare workers, they anticipated better salaries that match the work they do. The findings highlighted the need for the healthcare workers to be provided with internally equitable compensation programs that are

outwardly competitive as well as competitive salaries in order to motivate the works. This would translate to quality service delivery.

Edem et al (2017) conducted a study to analyze workplace environment and the associated effects on motivation of health care workers in Zenith Medical and Kidney Centre in Nairobi. The purpose was to analyze the workplace environment and the effects motivation and performance of the healthcare workers. The study identified that poor working environment contributed to low motivation of the healthcare workers. The key environmental factors that demotivated the healthcare workers included an unsafe health facility environment, poor furniture, poorly designed workstations, poor ventilation, excessive noise, and poor lighting. Other factors included lack of supervisory support, lack of proper communication channels within the workplace, and poor health and safety practices. In such a poor working environment, there is high exposure to occupational challenges such as ergonomic disorders and suffocation, heat stress and deafness which decreased their productivity.

2.6 Conceptual Framework

The study's objective was to identify the variables related to healthcare workers' motivation in Mavoko Sub-County in Kenya. Healthcare workers' motivation is the dependent variable, while independent variables are sociodemographic, environmental, psychological, and health system characteristics. Figure 2.1 below presents the conceptual framework, showing the dependent and independent variables of the study.

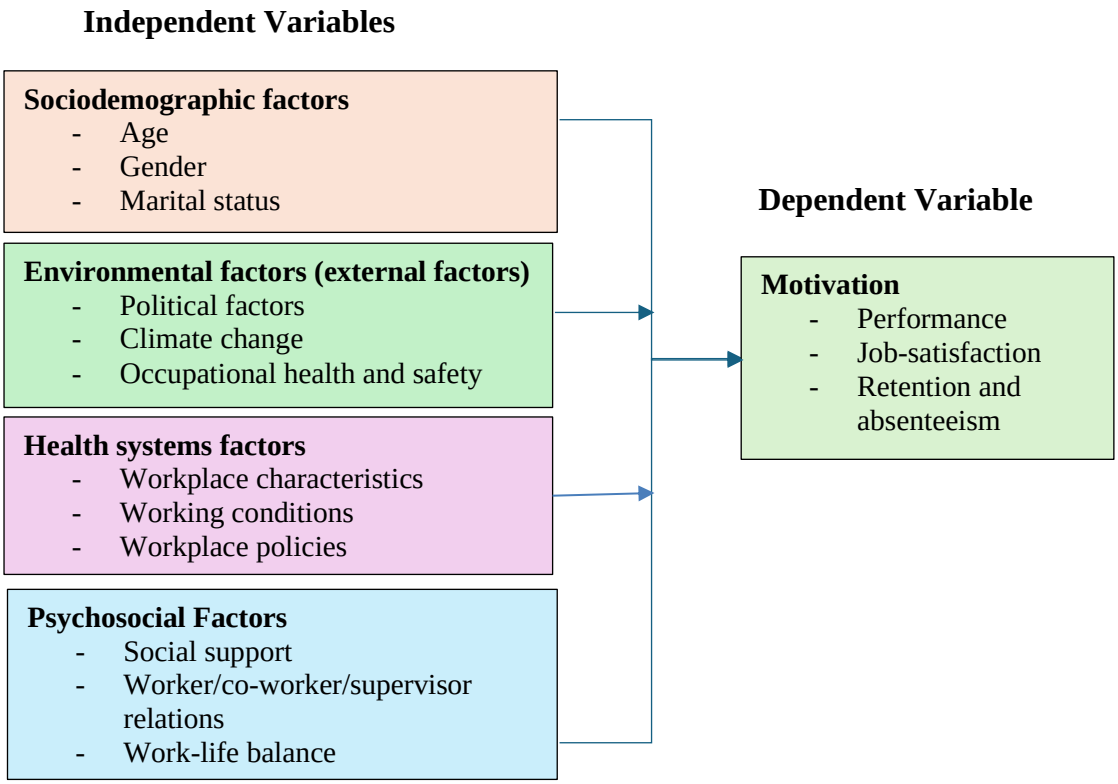

Figure 2.1: Conceptual framework.

Source: Author (2021), adapted from Bennett and Franco (1999)

2.7 Theoretical Framework

2.7.1 Maslow's Hierarchy of Needs Theory

This theory as proposed by Maslow (1943) argues that there is a hierarchy of needs that people need to satisfy as they progress. The theory bases its hierarchy of needs arrangement from the most basic to the most complicated based on the following premises:

a) When needs at one level are fulfilled, there is advancement to the needs in the next level.

b) If a once satisfied need's satisfaction is not maintained, it once again emerges as a priority need.

c) The needs are inter-reliant and overlapping. The needs are satisfied, starting from the basic ones to the complex ones.

According to Maslow the five levels of needs ordered in a manner that human beings seek to fulfill them are physiological, security, social, esteem and self-actualization. For a person to survive, the physiological needs must be satisfied first and include food, shelter and clothing (Navy, 2020). A person seeking to satisfy these needs is mostly motivated by employment income. Once the basic needs are satisfied, Maslow states that he will then seek security, for instance at home, at work, against lower levels of living standards. This is done through seeking things such as housing and health insurance, and collective activities via trade unions. Social groupings, as well as religious, cultural, athletic, and recreational organizations, help to satisfy the needs related to security, such as the urge to feel liked and a part of society (Navy, 2020).

At the workplace, employees form trade unions, information communication systems and other activity groups. When social needs are fulfilled, esteem needs are sought. These needs include influence and authority over others as well as recognition. People at this stage also desire to gain possessions and internal demands for self-respect (Trivedi & Mehta, 2019). Esteem needs can be satisfied through the occupation to highly ranked jobs and provision of status symbols such as luxurious cars, good carpeting among others. The uppermost level according to Maslow is self-actualization, which entails search for sociodemographic fulfillment and creative activities. Though few people attain self-actualization, those who reach this stage want to accomplish everything they are capable of achieving to develop individuals' skills, talents and aptitudes. According to Maslow's theory, employees have a tendency to move from their current level needs to their next level needs.

Despite offering a good foundation on understanding the motivation factors for individuals, Maslow's theory has been criticized for the following reasons: there is no hierarchical structure of needs, and every individual has some ordering for his need

satisfaction; in addition, some people may lack their lower level needs but may still strive for self-actualization (Kaur, 2013).

Maslow's theory was applied in this study in categorizing various motivational factors depending on their different levels in the hierarchy of needs. In addition, it was used to guide the research on the relevant stratification of the healthcare workers depending on their presumed level of needs required for motivation in the current working places.

2.7.2 Expectancy Theory

Expectancy theory was founded by Vroom (1964) and then expanded upon and improved upon by Porter and Lawler (1968) and Pinder (1987). According to Vroom (1964), this theory is based on four tenets. The first supposition is that as individuals get into an organization, they usually have diverse anticipations regarding their needs, drives, and prior experiences. These affect their reactions towards the organizations. The second assumption of expectancy theory is that individual's behavior is caused by conscious choice. This implies that people can choose different behaviors based on their expectancy calculations. The other assumption of expectancy theory is that people expect to gain various things from the organization which include attractive salaries, job security, and career progression, among other benefits. The last assumption of expectancy theory is that there are various alternatives that people choose in order to optimize results for them socio demographically.

Turnover and retention frameworks are developed through expectancy theory. These try to explain the reasons why people stay or leave an organization through the examination of relationships between environmental, psychological, and structural factors. Price (2001) while utilizing the expectancy theory argued that people in an organization have particular anticipations for work structural properties. Daly *et al.*, (2006) sums up the structural expectations as effective communication, unbiased

rewards, job security, and inclusivity in policymaking. Meeting these expectations increases employees' satisfaction, motivation and commitment towards the goals of the organization. This consequently increases the willingness of the workers to stay at their workplace. Failure to meet these expectations lowers employee satisfaction, commitment, and increases the intention of the employees to leave. In this way, psychological dispositions of the workers to stay or leave the organizations are influenced by perceptions of organizational structures.

One major criticism of the expectancy theory by Parijat and Bagga (2014) is its failure to take into consideration the emotional state of individuals being considered. The theory has also been criticized since it cannot work in practice in the absence of managers' active participation. The assumption that all components are already known prompts leaders to put more effort into determining what their workers value as rewards. The leaders should also assess the capabilities of their employees accurately and provide all the necessary resources as this would contribute to helping the employees achieve success in their jobs.

The theory was applicable in this research as it guided the research on some of the factors that affect healthcare workers' motivation and their behavior at work.

2.8 Conclusions

In this chapter, various empirical literature on motivation as well as studies on sociodemographic, health system, environmental and psychosocial factors of motivation were reviewed. This chapter discussed various theories that informed and anchored the study. Maslow's theory was applied to categorize various motivational factors and to guide the study on the relevant stratification of the healthcare workers based on their presumed level of needs required for motivation. In addition to this, this research was also anchored on Herzberg's expectancy theory to understand what

influences healthcare workers' behavior, choices, needs and ultimately motivation at work. Together, these theories are complementary in that they inform which needs are important to people at different stages of their lives. In addition, they highlight what factors influence people's needs therefore contributing to their motivation at work.

CHAPTER THREE

METHODOLOGY

3.0 Study Area

The research was undertaken in Mavoko Sub-County in Machakos County. This Sub-County borders Machakos Sub-County to the east, Kathiani Sub-County to the northeast, Nairobi County to the north, Kajiado North Sub-County to the west and Matungulu Sub-County to the northeast.

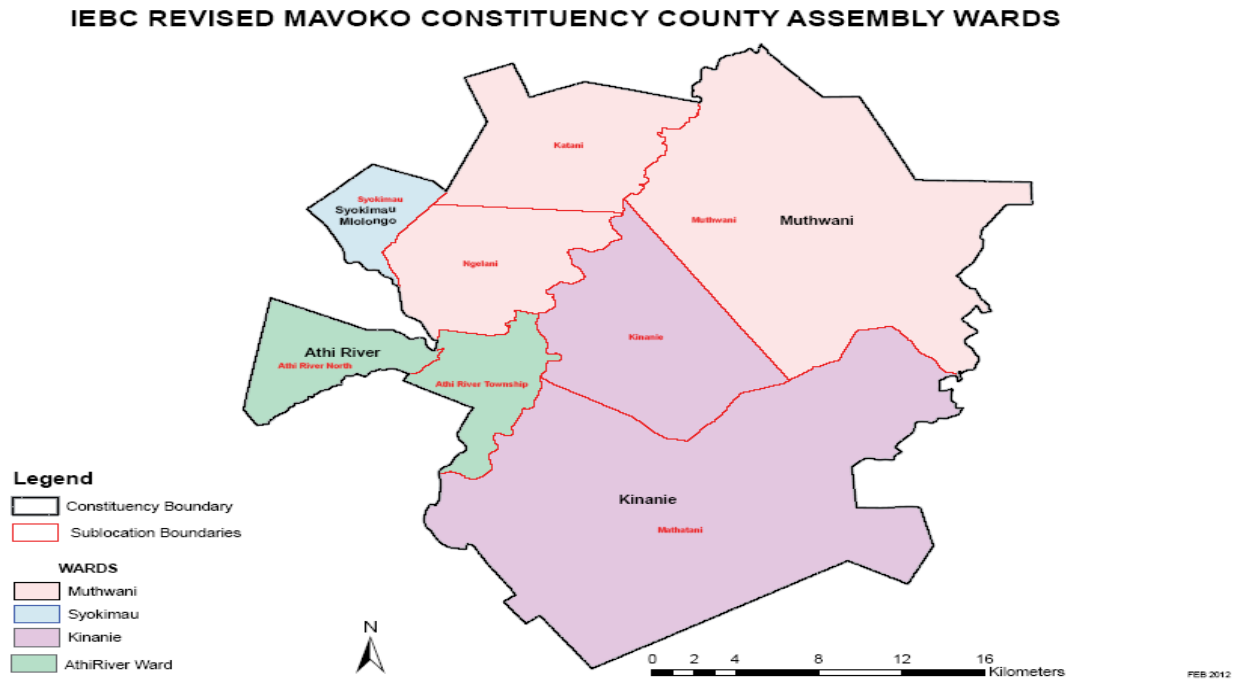

Figure 2: Mavoko Sub-County map.

Mavoko Sub-County covers an area of 843.2 square km and is divided into 4 administrative wards namely Mavoko, Mlolongo/Syokimau, Lukenya and Mathatani. The Sub-County has a population of 154,427 (KNBS, 2018), a population growth rate of 2% per annum. The choice of this Sub-County was due to the overstretched health facilities in the area that are inadequately equipped thus compromising health services in the area and as a consequence, residents are in most cases forced to seek treatment from private facilities (Ministry of Health, 2015). In addition, the Kenya Demographic

and Health Survey Report (2015) also reported a very low ratio of HCWs to the population indicating that, the number of HCWs serving in public health stands at approximately 200 HCWs serving an estimated population of around 150, 000 citizens.

3.1 Study Population

The population in this study comprised of 168 healthcare workers working in all 8 public health facilities in Mavoko Sub-County (District Health Information System DHIS 2018). These health facilities include 1 Level 4 Hospital, 3 health centers and 4 dispensaries (Appendix III). The Sub-County health management team's 5 key members were interviewed as key informants.

3.2 Study Design

A research design is a plan that stipulates how a research study is undertaken to meet the research objectives. It gives the structure, the methods and the procedures that are utilized to collect and analyze data with an aim of answering the research objectives (Sileyew, 2019). The research employed a cross-sectional research design with qualitative and quantitative approaches. This design involves data collection at a single point in time. In a cross-sectional study, the selection of the respondents is based on specific variables of interest. Studies using cross sectional research design are observational in nature whereby, only information and data that are present are collected without the manipulation of the respondents and the variables. This design was relevant and applicable as the study sought to examine the factors that are associated with motivation of healthcare workers.

Quantitative and qualitative research techniques were utilised. The quantitative approach involves a systematic empirical investigation of observable phenomena through statistical and computational methods. In this study, quantitative method involved the utilization of a questionnaire to gather data and statistical techniques to

determine the association of various factors with motivation. The rationale was to obtain more comprehensive data (Eti, 2021). Qualitative technique on the other hand involves an inductive process in which the researcher interacts with the respondents and asks them their perceptions about a given research phenomenon. This technique starts observation of the social interaction and in-depth interview of the social actors. After interviewing them, thematic analysis is utilized to draw inferences and develop explanations in line with the objectives.

3.3 Sample Size

A sample is a subset of the total population selected, studied and findings are generalized to the total population. Mavoko has a total of 8 public health facilities with about 168 healthcare workers during the study period (District Health Information System DHIS 2018). The study employed a census of all the 8 public health facilities and all the 168 healthcare workers, and the SCHMT's 5 key members. A census allows for the collection of detailed data from the entire population helping to yield reliable findings (Martínez-Mesa et al., 2016). Key informant interviews with 5 members of the SCMHT were selected based on their expertise and knowledge in health management matters.

3.4 Sampling Procedures

It is essential to ensure that the study participants are chosen based on good judgment in order for the data to be representative. In this study, purposive sampling, a non-probability sampling technique, was used to select Mavoko Sub-County (Campbell *et al*, 2020). This method, also known as judgement sampling, involves deliberate selection of respondents based on the desired traits they have (Sarstedt et al, 2018). This method is non-random and does not require an underlying theory. This implies that it is the researcher who determines what information is necessary and proceeds to

ascertain who is willing and can give the required data and information (Bernard et al, 2016).

In this study, purposive sampling entailed sampling eligible healthcare workers in Mavoko Sub-County. The population was small which necessitated a census to be conducted. This involved selecting each eligible healthcare worker in all public health facilities. In so doing, the study aimed to get a heterogeneous purposive sample with as many different cadres of healthcare workers to construct a robust view of the factors that are associated with their motivation. According to Martínez-Mesa *et al* (2016), a census allows for the collection of detailed data from the entire population thus helping to yield reliable findings.

The Department of Health in Machakos County was approached to provide a database of the healthcare workers who work in public health facilities in Mavoko Sub-County. Five (5) SCHMT members were selected for the key informant interviews, as they were considered well versed in health management matters and best suited to provide the qualitative data of this study. These were the Sub-County Medical Officer of Health (SCMOH), the Sub-County Public Health Nurse, the Sub-County Clinical Officer, the Sub-County Health Records and Information Officer as well as the Sub-County AIDS and HIV Coordinator.

3.5 Inclusion criteria

The following inclusion criteria was used:

i. Qualified healthcare workers working in public health facilities in Mavoko Sub-County, Machakos County.
ii. Healthcare workers who have been working in a public health facility in Mavoko Sub-County for at least 1 year.

These ensured inclusion of qualified health professionals of different cadres whose duties are to render health services to the public in the study area. This criterion enabled the study to include respondents who have gained sufficient exposure to their workplace in order to yield reliable findings.

3.6 Exclusion criteria

The exclusion criteria were as follows:

i. Healthcare workers who do not work in public health facilities in Mavoko Sub-County, Machakos County.
ii. Healthcare workers who have not worked for at least 1 year in a public health facility in Mavoko Sub-County.

3.7 Data Collection Tools

Primary data was collected which enabled the researcher to get a first-hand account of the perceptions of the respondents regarding the research phenomenon, in this case, the factors associated with motivation of healthcare workers in Mavoko sub counties. Primary data were gathered using the interview guide and the questionnaire. A semi-structured questionnaire was used to collect data from the healthcare workers. Both structured and non-structured items were included in the questionnaire, which were modified for this study borrowing from standardized questionnaires for employee satisfaction measurement as well as motivational needs of the Workplace Motivation Inventory. The questionnaire was sectioned into various parts. In the first section, the questionnaire gathered the sociodemographic data of the healthcare workers and the general data about the health facilities. The other sections were structured as per the specific objectives. Questionnaires were self-administered. Distribution of the questionnaires and follow-up was done by the researcher with the help of an assistant.

Interview was used to collect data from key informants. The key informants, in this case, were 5 members of the SCHMT. This tool was preferred since it provides some flexibility during the interview process. Additionally, interviewing allows the respondents to delve deeper and provide more details, which makes it possible for the researcher to collect large volumes of data and information (Roulston & Choi, 2018). Accordingly, this approach enables the interviewer to thoroughly examine every aspect that influences the respondents' answers, including their motivations, feelings, beliefs, and opinions (Aspers & Corte, 2021). This method enables the interviewer to create a comfortable environment for the respondents as well as a good rapport with them. This makes them comfortable and willing to give data and information.

The interviews were done by principal researcher with the help of an assistant. The research assistant was well trained as regards what skills to employ while interviewing, how to clarify the questions and adherence to ethical issues. In this study, the interview schedule was structured as per the research objectives. The interview was done face to face with the respondents, in a private setting. The interviews augmented the quantitative data collected using the questionnaires.

When conducting the interviews, field notes, interview schedules and audio recorders were used. This was crucial in order to make it easier for the researcher to transcribe for analysis purpose and to have a reference point in case of the need for clarification. The field notebook was utilized to record various aspects of the status of healthcare facilities and the working environment. Audio recorders were done under limitations based on the respondents' willingness and permission. Therefore, informed consent was sought from the respondents before data recording.

Secondary data was collected to supplement the primary data gathered. This was done using document review and analysis. Document review involves reviewing and

scrutinizing the available print and electronic materials that are relevant to the research phenomenon (Bretschneider et al, 2017). This method is crucial, less costly and it offers a good way of supplementing the primary data (Morgan, 2022). Numerous articles relating to motivation of healthcare workers were reviewed.

3.8 Pilot Testing

A pilot study was conducted prior to the main data collection. This is a preliminary and small-scale trial conducted before the full-scale implementation of a project, research study (Brooks, 2016). It helps identify potential issues, test procedures, and ensure that the main study or project is well designed and can be carried out effectively. Also, piloting is done to enhance the reliability of the research tools. Piloting involved 17 health workers in the neighboring Kathiani Sub-County. According to Mugenda and Mugenda (2012), a pilot study should be done to about 10% of the respondents who are not part of the study. The purpose of pretesting was to assess the clarity of the questionnaire items and to allow for modification of inadequate and vague items. This helped to enhance research instruments and increase reliability.

3.9 Validity and Reliability Analysis

The questionnaire used was adapted from a study by Asuquo *et al.,* (2016) on motivation and job satisfaction among hospital nurses working in Port-Harcourt Teaching Hospital, Nigeria. It was therefore imperative to test the reliability and validity of the questionnaire. These concepts are utilized to evaluate the quality of the research. Validity refers to correctness and significance of the conclusions made from the study (Heale & Twycross, 2015). This implies that it is the degree to which the study results accurately reflect the problem that is being studied. According to Borg (2017) validity is the degree to which an instrument, measure, or study accurately measures what it intends to measure. Assessing validity ensures that the results are

meaningful and reliable. Expert judgment was used to determine the validity of the questionnaires. Therefore, assistance was sought from her supervisors. They enabled the researcher to further develop the questionnaire in order to yield valid results.

Reliability analysis on the other hand determines the consistency of measures. Therefore, if a research tool produces consistent results over time, it is deemed reliable (Kothari, 2004). The test-retest method was used to determine the reliability. This helped to ensure the research findings obtained are reliable and authentic. A pilot study was conducted 2 weeks prior to the actual data collection exercise to determine the reliability of the research questionnaire. A Cronbach's Alpha statistic for all questionnaire items was computed and general assessment done (Sekaran & Bougie, 2010). A reliability coefficient of 0.73 was obtained. This coefficient was greater than 0.6, which was sufficient.

3.10 Data Analysis

The study analyzed data gathered from healthcare workers using the Statistical Package for Social Sciences (SPSS) program. Analysis involved descriptive and inferential methods. Descriptive analysis involves a detailed examination and presentation of the characteristics, features, and attributes of a particular subject or phenomenon (Kemp et al, 2018). The study employed descriptive techniques to examine the respondents' demographic information. The demographic factors that were examined included age, gender, marital status, work experience, and educational background. The findings were then presented using frequency tables, percentages, and figures. Data on the different motivation factors were analyzed and presented in the form of Likert scale analysis and standard deviation.

Inferential analysis involves drawing conclusions or making inferences based on data or evidence gathered. This type of analysis goes beyond the literal interpretation of

information and aims to derive deeper insights, predictions, or generalizations. In this study inferential analysis was done to determine how various factors influence the motivation of HCWs in Mavoko Sub-County. This was done using the Chi Square test. Chi Square analysis is a bivariate analysis that focuses on examining the relationship between 2 variables within a dataset. It seeks to assess the degree of association between 2 variables within a dataset. In this study, chi-square analysis was found to be appropriate to examine the degree of association between motivation and the categorical independent variables; psychosocial, environment, health system and psychosocial factors. As this study did not seek to examine the relationship between 3 or more variables simultaneously, multivariate analysis was not applied.

Qualitative data was analyzed thematically. This involved identification and grouping of different themes as per the objectives of the study. The purpose of this kind of analysis is to identify, analyze, and explore the underlying themes that contribute to the overall meaning of the research as guided by the research objectives (Campbell et al, 2021). The qualitative methods helped to obtain an in-depth account of factors associated with health workers' motivation; this augmented and synergized the study's quantitative data.

3.11 Ethical Consideration

This being social science research, it was crucial for ethical guidelines and standards to be observed in order to ensure the respondents are protected. In this regard, several moral principles guided the researcher's conduct throughout the data collection exercise. The principals guided the conduct of the principal researcher and the research assistant also regarding various aspects such as privacy, anonymity, discretion, legality and professionalism as they interact with the respondents and during data collection exercise (Mertens, 2018).

With the necessity for ethical principles in mind, the researcher first submitted an application for an ethical review as required by the university. The researcher then sought permission from The Machakos County Government and the management of the public health facilities in Mavoko Sub-County to conduct the study. The NACOSTI research permit was also sought accordingly. Before distributing the questionnaires and starting the interviews, the introduction was done, and the respondents were briefed on what the study entailed. This enabled the respondents to be fully informed before deciding whether to partake in the study or not. Briefing the respondents enabled them to have adequate comprehension of the details of the study and all the details they needed before deciding on whether to participate or not. In this regard, the researcher started by introduction of the data collectors, what the research entails, all procedures involved and all the probable occurrences and outcomes. The researcher also explained the role of the respondents. After explaining the study's purpose to the respondents, the researcher obtained informed consent and data collection commenced. The respondents were also informed that taking part in the study was voluntary and that they could withdraw from the exercise at will. As such, all the respondents were selected based on their willingness.

The respondents were assured that high privacy would be upheld. Guaranteeing the respondents increased their willingness to take part in the study. Also, this helps to build trust with the respondents and make them comfortable giving data and information needed. Lack of trust between the researcher and the respondents reduces the guarantee of the validity and data worthiness (Rudolph et al, 2020). In this study, to win the respondents' trust, assurance was given that data and information would not be disclosed to third parties. In addition, privacy was maintained by not disclosing the names of the participants and by using pseudonyms for the interviewees. The researcher

elucidated to the participants that providing their name on the surveys was not mandatory and they did not have to worry about it. This ensured that no victimization occurred, and that confidentiality was upheld. This reassurance was printed in the introduction to the questionnaire so that all the respondents were aware of it.

The researcher ensured that the respondents were not harmed in any way. When conducting field research, it is imperative for the researcher to think about ways of protecting the participants from harm. In this instance, harm may be psychological or physical. However, in social research, it is likely for the respondents to experience some degree of unavoidable degree of discomfort, psychological distress, social disadvantage, and privacy invasion. In this research, the researcher tried as much as possible to curb and minimize these negative effects in order to make the respondents comfortable.

When conducting data collection, some devices such as recorders were used under restrictions (Fox & James, 2021). After data collection, data analysis and interpretation were done strictly based on the research objectives and free from the researcher's personal bias. The findings were used strictly for academic purposes and for advocacy, intervention activities and for policymaking.

3.12 Study Limitations

The data collected were very subjective and difficult to verify because issues such as sociodemographic bias could affect the respondents' views. To mitigate this, an explanation was made as to what the study entailed. Secondly, this study design was also time consuming and tedious as it involved analyzing the various questions in the questionnaires and making inferences from the data gathered. Due to the busy nature of healthcare workers' duties, it led to them not having a lot of time to commit for the data

collection. To mitigate this, the study used the drop and pick later method in order for the respondents to have ample time to fill them at their convenience.

The study also posed a psychological risk to the respondents due to the nature of questions, which were related to sociodemographic views regarding their work environment. In order to mitigate this, the questionnaire and key informant interviews were carried out in a private area to ensure privacy and confidentiality for respondents, which increased the accuracy of their responses. Fair treatment with the highest decency and respect was given to each respondent. No respondent was coerced into participating in the study against their will, and no discrimination was allowed.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter covers data analysis and presentation of the research findings organized according to the study objectives. The analysis of data collected from 108 healthcare workers from 8 public health facilities revealed the following:

4.1 Response Rate

The researcher distributed 168 questionnaires whereby 108 were dully completed. This accounted for a response rate of 64%. Kothari (2004) asserts that a response rate of more than 50% is sufficient to produce dependable results and conclusions. As a result, the study's response rate was adequate to draw conclusions and produce trustworthy data.

4.2 Demographic Analysis

Based on the findings, 55% health workers who participated in the study were female while 44% were male. The average age of the respondents was 34 years, and the age range was 24 years to 56 years. Table 4.1 shows that most respondents were aged between 20 and 40 years and most of the respondents 84 (78%) reported being married. Further analysis indicated that 78% of the healthcare workers had children.

Analysis of the education level revealed that 34% of the respondents are degree holders, and that 68% of the healthcare workers had between 2-10 years of work experience.

Table 4.1: Demographic characteristics of HCWs in Mavoko Sub-County

Demographic Variables		Frequency (n=108)	Percentage (%)
Gender	Males	49	45
	Females	59	55
	Total	108	100
Age	20-30	21	19
	31-40	74	69
	41-50	11	10
	Above 50 years	2	2
Marital Status	Married.	84	78
	Not married	23	21
	Divorced	1	1
Children	Children	84	78
	No Children	24	22
Education Level	Certificate	10	9
	Degree	34	32
	Masters	1	1
	Others	63	58
Duration of employment	5-10 years	38	35
	2-5 years	36	33
	2 years	21	19
	10-20 years	10	10
	Over 20 years.	3	3

4.3 Health Workers' Motivation

As an indicator of motivation, analysis was done to ascertain if the health workers enjoyed their work, which is shown in figure 4.1 below. Majority 100 (93%) of the health workers agreed that they enjoyed their work compared to 8 (7%) who reported that they did not enjoy their work.

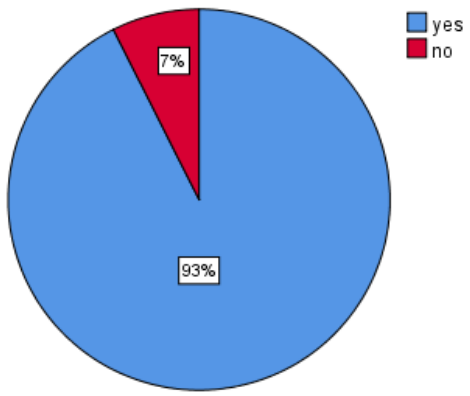

Figure 4.1: Proportion of Health Workers motivation in Mavoko Sub-County who reported to enjoy their job

When asked about their current motivation level, 49 (45%) of the participants reported having some level of motivation whereas 19% of the HCWs reported to be neither motivated nor unmotivated (neutral).

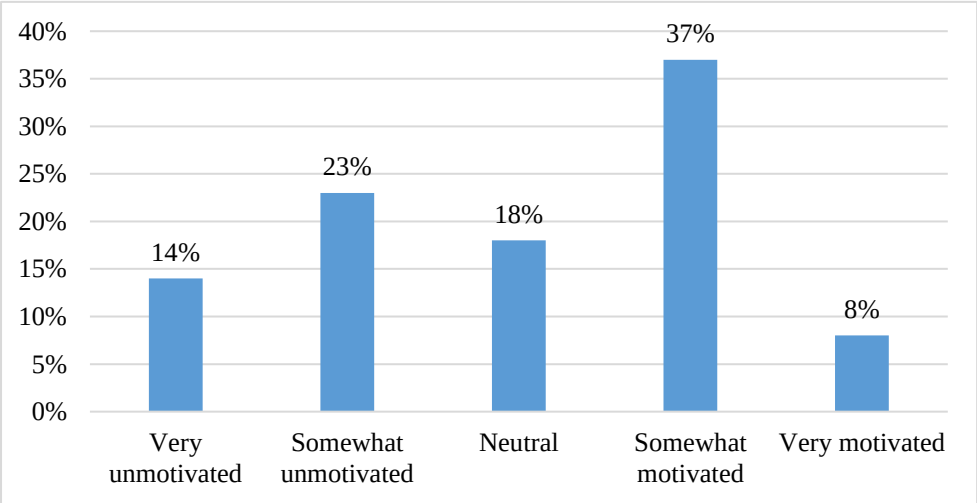

Figure 4.2: Motivation levels of Healthcare Workers in Mavoko Sub-County

4.4 Sociodemographic Factors and Motivation of Healthcare Workers

From the findings in Table 4.2 age is the only sociodemographic factor that was significantly associated with motivation (p=0.002) with the younger age band of 20-30

years having higher frequencies of respondents who reported being more motivated as compared to older age bands.

Among the 20-30year old respondents, the majority (55%) reported being either "somewhat motivated" or "very motivated" as compared to 41.3% of the 31-40yrs, 45.5% of the 41-50yrs and 0% of the over 50yr age bands. Gender and marital status on the other hand were shown not to be significantly associated with the motivation of HCWs.

Table 4.2: Relationship between demographic factors and motivation among Healthcare Workers in Mavoko Sub-County

Sociodemographic factors	**Motivation level**					**Chi-square test**
	1 (very unmotivated)	**2 (unmotivated)**	**3 (neutral)**	**4 (somewhat motivated)**	**5 (very motivated)**	
Gender						$\chi^2 = 6.417$
Male	6(12.5%)	12(25%)	5(10.4%)	20(41.7%)	5(10.4%)	df= 4
Female	9(15%)	12(20%)	17(28.3%)	19(31.7%)	3(5%)	p= 0.170
Age						
20-30yrs	3(15%)	0(0%)	6(30%)	7(35%)	4(20%)	$\chi^2 = 31.177$
31-40yrs	7(9.3%)	21(28%)	16(21.3%)	28(37.3%)	3(4%)	df= 12
41-50yrs	5(45.4%)	1(9.1%)	0(0%)	4(36.4%)	1(9.1%)	p= 0.002
Over 50yrs	0(0%)	2(100%)	0(0%)	0(0%)	0(0%	
Marital status						
Married	12(11.7%)	21(20.4%)	15(14.6%)	28(27.2%)	4(3.9%)	$\chi^2 = 10.823$
Not married	2(1.9%)	2(1.9%)	5(4.9%)	9(8.7%)	4(3.9%)	df= 8
Divorced/ separated	0(0%)	0(0%)	1(1%)	0(0%)	1(1%)	p= 0.212

4.5 Environmental Factors and Motivation of HCWs

The influence of environmental factors on motivation of HCWs was determined using the Chi square test. The specific factors analyzed here included organizational and political factors, climate change as well as occupational health and safety. Among the environmental factors analyzed, organizational and political factors were strongly correlated (p=0.001) as well as occupational health and safety (p= 0.001) with

motivation, whereas the association of climate change and motivation was not significant (p = 0.027).

Table 4.3: Relationship between Environmental Factors and Motivation among Healthcare Workers in Mavoko Sub-County

Environmental Factors	**Motivation level**				**Chi-square test**
	2 (unmotivated)	**3 (neutral)**	**4 (somewhat motivated)**	**5 (very motivated)**	
Organizational and political factors					χ^2=48.766 df= 3 p= 0.001
Good	7(6.4%)	18(16.5%)	35(32.1%)	7(6.4%)	
Poor	32(29.4%)	4(3.7%)	5(4.6%)	1(0.9%)	
Climate change					χ^2=80.803 df= 3 p= 0.027
Good	6(5.5%)	22(20.2%)	39(35.8%)	8(7.3%)	
Bad	33(30.3%)	0(0%)	1(0.9%)	0(0%)	
Occupational health and safety					χ^2=67.691 df= 3 p= 0.001
Good	6(5.5%)	22(20.2%)	39(35.8%)	8(7.3%)	
Bad	33(30.3%)	0(0%)	1(0.9%)	0(0%)	

The need for the environmental conditions to be enhanced and the need to improve the welfare of the respondents was highlighted by one of the interviewees.

The welfare of the HCWs should be a key priority. They should be given risk allowances, staff houses, awards to best performing HCWs, refreshments and other incentives (Key Informant 5).

4.6 Health system factors and Motivation of HCWs

In this section, the influence of health system factors on motivation of HCWs was analysed. The health system factors analyzed here included workplace characteristics, working conditions, and workplace policies.

The three health system factors analyzed had significant influence on motivation of HCWs whereby workplace characteristics, working conditions and workplace policies

had p values of 0.003 (χ^2 =13.820), 0.001 (χ^2 = 33.677) and 0.001 (χ^2 = 51.363) respectively. From table 4.4 below, respondents who perceived their workplace characteristics, working conditions and workplace policies to be "good" all had higher frequencies of HCWs with greater levels of motivation. In this regard, 35.2% of the HCWs who reported their workplace characteristics to be "good" were either "somewhat motivated" or "very motivated" as compared to 8.4% of those who felt that their workplace characteristics were "poor". 27.8% of HCWs who perceived their working conditions to be "good" reported being "somewhat motivated" or "very motivated" as compared to 15.8% of those who felt that their working conditions were "poor". In addition, 33.4% of the respondents who were of the opinion that their workplace policies were "good" reported being either "somewhat motivated" or "very motivated" compared to 10.2% of those who felt that these policies were "poor".

Table 4.4: Relationship between Health System factors and Motivation among Healthcare Workers in Mavoko Sub-County

Health System Factors	**Motivation level**				**Chi square test**
	2 (unmotivated)	**3 (neutral)**	**4 (somewhat motivated)**	**5 (very motivated)**	
Workplace characteristics					χ^2= 13.820 df= 3 p= 0.003
good	21(19.4%)	9(8.3%)	33(30.6%)	5(4.6%)	
poor	18(16.7%)	13(12.0%)	6(5.6%)	3(2.8%)	
Working conditions					χ^2= 33.677 df= 3 p= 0.001
good	6(5.6%)	14(13%)	29(26.9%)	1(0.9%)	
poor	33(30.6%)	8(7.4%)	10(9.3%)	7(6.5%)	
Workplace policies					χ^2= 51.363 df= 3 p= 0.001
good	5(4.6%)	17(15.7%)	34(31.5%)	2(1.9%)	
poor	34(31.5%)	5(4.6%)	5(4.6%)	6(5.6%)	

The key informants also highlighted the need for good support structures. One of the interviewees had this to say.

> *There is a need for healthcare workers to be offered opportunities to advance their profession. There should be sponsorship for the HCWs who are willing to upgrade. Provision of refresher courses to the HCWs is equally important (Key Informant 1)*

Another interviewee had this to report.

> *There is a need to ensure the healthcare workers have job security, their salaries are increased, there is merit-based promotions, and they should be provided with sufficient resources (Key Informant 4*)

4.7 Psychosocial Factors and Motivation of Healthcare Workers

Figure 4.3 below indicates that the highest proportion of HCWs 83 (77%) reported moderate job stress, 13 (13%) reported that they had severe job stress, 7 (6%) reported that they had mild job stress while 5 (5%) reported that they had extreme job stress.

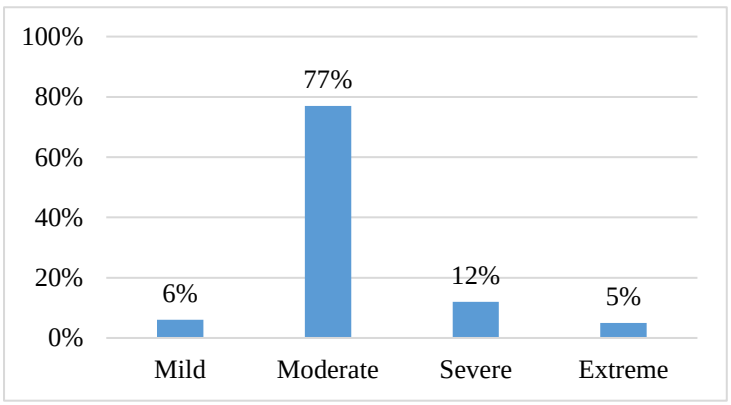

Figure 4.3: Healthcare Workers' Perception on their Level of Job Stress in Mavoko Sub-County

The majority of respondents reported that job stress resulted from high workload. This accounted for 73 (68%). Other causes of job stress result from lack of work life balance, the nature of their jobs and their responsibilities, and other causes.

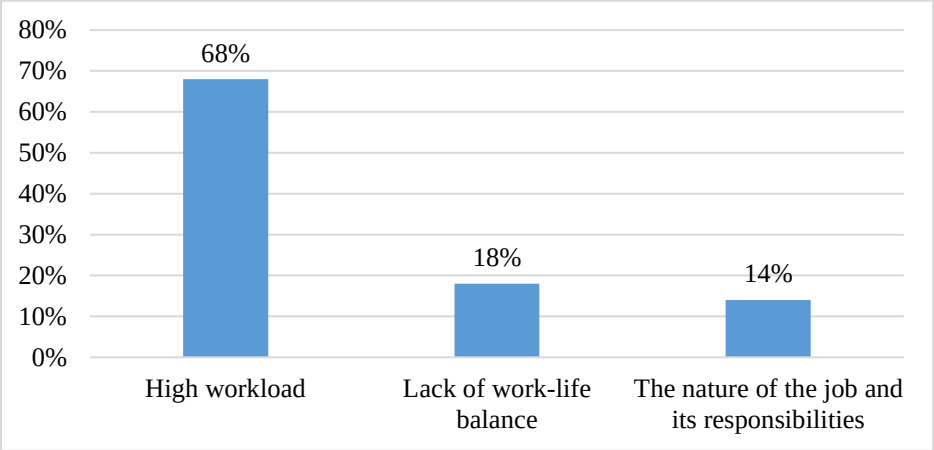

Figure 4.4: Causes of Job Stress among Healthcare Workers in Mavoko Sub-County

The need for the healthcare workers to be given manageable workloads was highlighted by the key informants who had this to report:

> *The HCWs should have manageable workloads, and flexible working shifts in order to reduce burnouts. This will also help them to have family-work balance as quite a large number of them have families and children (Key Informant 3).*

> *Emotional burnout is a barrier to quality service delivery among the HCWs. The HCWs should have flexible working hours, their roles should be well defined, and they should be provided with mentorship program. This is vital in reduction stress (Key Informant 2).*

The relationship between psychosocial factors and motivation was determined using Chi square test. The specific psychosocial factors analyzed here included worker-

supervisor relation, work-life balance, social support as well as employee mental health and wellness.

The findings indicated that all the psychosocial factors analyzed were highly correlated with motivation. It emerged from the findings that 31.5% of HCWs who felt that their worker-supervisor relation was “good” were either “somewhat motivated” or “very motivated” as compared to 12.1% who perceived this relation to be “poor”. Among the respondents who perceived their work-life balance to be “good”, 42.6% of them were either “somewhat motivated” or “very motivated” as compared to 0.9% of those who were of the opinion that their work-life balance was poor. 44% of the HCWs who reported having a “good” social support were either “somewhat motivated” or “very motivated” as compared to 0% of those who reported to have a ‘poor” social support. Similarly, 44% of HCWs who perceived their mental health and wellness to be “good” reported being “somewhat motivated” or “very motivated” compared to 0% who perceived their mental health and wellness to be “poor”.

The findings are summarized as follows:

Table 4.5: Relationship between Psychosocial factors and Motivation among Healthcare Workers in Mavoko Sub-County

Psychosocial Factors	**Motivation level**				**Chi-square test**
	2 (somewhat unmotivated)	**3 (neutral)**	**4 (somewhat motivated)**	**5 (very motivated)**	
Worker-supervisor relation					χ^2=33.238 df= 3 p= 0.001
good	9(8.3%)	16(14.8%)	32(29.6%)	2(1.9%)	
poor	30(27.8%)	6(5.6%)	7(6.5%)	6(5.6%)	
Work-life balance					χ^2=79.947 df= 3 p= 0.001
good	6(5.6%)	22(20.4%)	38(35.2%)	8(7.4%)	
poor	33(30.6%)	0(0%)	1(0.9%)	0(0%)	
Social support					χ^2=100.538 df= 3
good	2(1.8%)	22(20.2%)	40(36.7%)	8(7.3%)	

poor	37(33.9%)	0(0%)	0(0%)	0(0%)	p= 0.001
Employee mental health and wellness					χ^2 = 109.00
good	0(0%)	22(20.2%)	40(36.7%)	8(7.3%)	df= 3
Poor	39(35.8%)	0(0%)	0(0%)	0(0%)	p= 0.001

CHAPTER FIVE

5.0 DISCUSSION

5.1 Introduction

In this chapter, the study findings are discussed in relation to the set objectives. The discussion also looks at the similarities and differences from other studies.

5.2. Discussion

5.2.1 Sociodemographic Factors Associated with Motivation of Healthcare Workers

In this section, the purpose was to determine how sociodemographic factors influence motivation of healthcare workers. It emerged from the analysis that age, as a sociodemographic factor, is a key determinant of motivation with younger respondents having higher levels of motivation compared to those in the older age bands. This could be due to the fact that younger HCWs being earlier in their careers are more optimistic about their professional development. They are also less likely to have experienced burnout as compared to their older colleagues. Similar to other regional and global studies, there were more female than male HCWs in Mavoko Subcounty.

The findings are in tandem with Komen *et al.,* (2018) who examined the motivational factors of public health workers in Baringo County of Kenya and found out that sociodemographic factors such as age and education level were key determinants of motivation among HCWs. In contrast to this study, marital status in this case was found to be associated with motivation.

On the other hand, Adillo *et. al.*,(2020) in a study on factors that influence the motivation of healthcare workers and health extension workers in Ethiopia found that older HCWs showed greater motivation to do their job than their younger colleagues.

5.2.2 The Environmental Factors Associated with Motivation of Healthcare Workers

The study identified that environmental factors are key determinants of motivation. In particular, organizational and political factors as well as occupational health and safety emerged as key determinants of HCWs' motivation. Specifically, HCWs who perceived the organizational and political conditions in place to be "good" reported higher frequencies of respondents with increased levels of motivation as compared to those who perceived these to be "poor". 35.2% of the HCWs who reported their workplace characteristics to be "good" were either "somewhat motivated" or "very motivated" as compared to 8.4% of those who felt that their workplace characteristics were "poor". These include factors such as input from labor unions on matters pertaining to the wellbeing of healthcare workers, local political systems and regular communication between staff and management regarding safety issues. In addition, these also include effective and sufficient legal policies to safeguard health professionals, lack of political interference from actors such as county assembly and national government in healthcare worker's duties.

Additionally, HCWs who perceived the occupational health and safety conditions in place to be "good" also reported higher frequencies of respondents with greater levels of motivation as compared to those who perceived these to be "poor". These include occupational health and safety policies and systems that safeguard HCWs in their workplace. On the other hand, climate change was found not to be strongly associated with motivation. This pertains to extremes of heat due to climate change as well as natural disasters and variable rainfall patterns.

These findings agree with those of Afolabi, Fernando and Bottiglieri (2018) who analyzed the effect of organizational factors on motivation of healthcare employees in

the UK, Europe, Africa and Asia and found that environmental factors are key determinants of healthcare workers' motivation. The study established that the provision of a conducive environment ultimately helped to increase employee's motivation and job satisfaction which in turn promoted the delivery of quality healthcare services. Poor working environment with poor conditions such as poor lighting, electricity failures, insufficient or lack of water, and lack of necessary facilities demoralized the healthcare workers and caused demotivation and poor performance. In contrast, here, the aspect of the delivery of healthcare services was examined which was not an objective of this research.

The current results are in tandem with Sato *et al.,* (2017) which concluded that at primary level health institutions in rural Tanzania, maintaining a favorable working environment is a major motivator for healthcare professionals. Healthcare facilities that prioritize psychological well-being, job satisfaction, professional growth, effective communication, and recognition create environments where healthcare workers thrive. By investing in and sustaining such environments, the healthcare centers do not only retain their skilled workforce but also ensure the consistent delivery of quality patient care. However, only primary level healthcare facilities as opposed to level 2 and level 3 facilities were included in this analysis.

The results are consistent with research by Théoneste (2015) on how occupational health standards affect healthcare workers' motivation and job satisfaction at Kinihira Hospital in Rwanda whereby, it emerged that health and safety practices to a large extent influenced motivation and identified that motivation of healthcare workers was influenced to a large extent by the health and safety practices. The study identified that employee motivation and productivity was largely influenced by the safety practices, safety programmes the attitude of the management on the safety and health guidelines

and practices and supervision of health and safety practices. The study concluded that if effectively managed, safety and health measures positive impact on the employee motivation. However, the existing health and safety measures at the hospitals were found to be inadequate, which indicated the need for the management of the hospitals to put in place effective and active health and safety committees. Also, the findings highlighted the need for the hospitals management to undertake regular monitoring and evaluation and continuous reviews of occupational health and safety.

Locally, Ojakaa, Olango and Jarvis (2014) conducted a study on factors that affect motivation and retention of primary healthcare workers in disparate regions in Kenya and observed that demotivation among healthcare workers was high in poor working environments. In such poor environments, the intention to leave was also high among the healthcare workers due to low job commitment and satisfaction. These results are in tandem to those of this study with the difference that only healthcare workers in Mavoko Sub-County were included in this study.

5.2.3 The Health System Factors Associated with Motivation of HCWs

The data suggests that health system factors are strongly associated with motivation. Broadly, workplace characteristics, working conditions and workplace policies were found in this study to have a significant influence on HCWs' motivation. These include factors such as an efficient health information system (MoH registers and/or electronic medical records), sufficient availability of medical supplies and equipment, training opportunities, clear stipulation of job description and job requirements. This also pertains to timely payment of salaries, and the provision of adequate information from the management on what is going on in their departments as well as involvement in decision making are contribute to Healthcare Workers' motivation.

The study results are in line with Ayyash and Aljeesh (2011) among nurses at European Gaza hospital in Gaza strip in which the findings indicated that the provision employee development programs and services helped to motivate the healthcare professionals. For instance, the provision of professional learning and training programs helped to increase the nurses' motivation. In a similar study conducted by Awosusi and Jegede (2011) among nurses in Ekiti state in Nigeria, the findings indicated that provision of sufficient and effective support structures help to motivate the nurses. Provision of these, besides increasing their motivation, also helped to increase their ability to offer high quality services. Whereas the findings of the two studies cited here are in line with the current study, the respondents included different cadres of HCWs as opposed to nurses alone.

Locally, comparable results were obtained by Ojakaa *et al.,* (2014) who did a study in Turkana, Machakos and Kibera slums and concluded that insufficient healthcare system factors contribute to healthcare workers' motivation. The study concluded that inadequate facilities such as lack of electricity and hospital facilities for use by HCWs, transport and the state of facilities were sources of demotivation in the public health facilities. On the other hand, adequate training of HCWs, administration support and manageable workload were the main sources of motivation for workers selected from private hospitals. By investing in continuous learning, fostering supportive leadership, and addressing workload concerns, hospitals can create environments where healthcare professionals feel valued, motivated, and equipped to deliver exceptional patient care. The study concluded that recognizing and prioritizing these factors is essential for building a resilient healthcare workforce and maintaining high standards in the health sector.

5.2.4 The Psychosocial Factors Associated with Motivation of Healthcare Workers

A strong relationship was established between psychosocial factors and motivation in this study. Worker-co-worker-supervisor relation, work-life balance, social support as well as employee mental health and wellness had significant correlation with HCWs' motivation. The study revealed higher frequencies of HCWs who reported to be more motivated if they felt that their worker-supervisor relation, work-life balance, social support as well as their mental health and wellness were "good" as compared to those who felt that these were "poor".

The findings are in line with the findings of a study conducted by Wilkins (2008) on the correlates of medication error in hospitals in which the findings indicated that lack of job security, long overtime work and heavy workloads contributed to low motivation of healthcare workers. This in turn led to the provision of poor-quality services as evidenced by various medication errors made. When the HCWs work under uncertain employment terms and conditions, this leads to stress and anxiety, which in turn leads to low motivation. When working in such circumstances, the majority of the HCWs are unable to plan their future and this impacts on their motivation to invest in their careers. Regarding long overtime work, the study concluded that overtime work results to physical and mental fatigue, which in turn reduces the overall wellbeing of the HCWs. When continuously exposed to overtime work, they suffer from burnout, decreased job satisfaction, and low motivation. It becomes hard for the HCWs to balance work with personal life. This impacts motivation, as they feel their efforts are not rewarded sufficiently. Regarding workloads, the study concluded that excessive work leads to stress and job dissatisfaction. This is because they deal with demanding workloads as a result of patients' needs, administrative tasks and other responsibilities.

The findings were also in line with the findings of a study conducted by Goetz (2015) among practice assistants at work in general medical care in the German federal state of Baden-Wuerttemberg, whereby a conclusion was made that psychosocial factors are key determinants of motivation. Based on the analysis, the health practice assistants reported the highest scores for the psychosocial factor as sense of community and the lower score for influence at work. In addition, the heath care assistants who worked part-time rated their psychosocial factors at work and health-related outcomes more positively as compared to those in full-time employees. In comparison, psychosocial factors also emerged as key determinants of motivation in this study. However, it can be argued that the experience of practice assistants may differ from qualified healthcare workers.

Locally, similar findings were obtained by Bosire (2018) and Mbindyo (2009) in 2 different studies. Bosire (2018), in a study on the influence of working environment on job satisfaction among physicians in public health sector of Nairobi County concluded that various workplace aspects had influence on the workers' motivation. The study concluded that creating a positive, supportive, and well-equipped workplace not only enhances the well-being of healthcare professionals but also contributes to better patient care outcomes. Mbindyo (2009) on the other hand concluded that healthcare workers' motivation was highly determined by different psychosocial factors such as high workload, and burnout. This in turn resulted to poor attitudes towards their work, and patients, and poor services.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

This section presents conclusions and recommendations based on the study findings. The study identified sociodemographic, environmental, health system and psychosocial factors to be key determinants of motivation of healthcare workers' motivation.

6.1.1 Sociodemographic Factors and motivation of Healthcare workers

The study concludes that certain sociodemographic factors such as gender and marital status are not significant determinants of healthcare workers' motivation. This implies that the motivation of healthcare workers does not depend on whether a HCW is male or female or whether they are married, single or separated/divorced. Age on the other hand, was shown to be strongly associated with HCWs' motivation, implying that the age of HCWs determines their motivation. Further, the study revealed that younger HCWs had higher levels of motivation as compared to their older colleagues.

6.1.2 Environmental Factors and motivation of Healthcare workers

From the analysis findings, a conclusion was made that environmental factors are key determinants of motivation, specifically organizational and political factors as well as occupational health and safety. In this regard, HCWs who perceived their organizational and political factors as well as their occupational health and safety conditions to be "good" were shown in this study to have higher levels of motivation as compared to those who perceived these to be "poor". This shows that a good working environment is key in the motivation of HCWs and policies safeguarding health professionals in the workplace were noted to strongly influence motivation. Therefore, health facilities should therefore ensure that HCWs are provided with a conducive working environment to increase their motivation.

6.1.3 Health System Factors and motivation of HCWs

As regards the relationship between health system factors and motivation, a conclusion was made that health system factors had significant influence on motivation and such as workplace characteristics, working conditions and workplace policies. The study concludes that having health system structures in place that are perceived as being "good" by |HCWs significantly increases motivation. To this end good support structures, provision of sufficient medical supplies and equipment, employee development programs, clear stipulation of job description and job requirements, stop timely payment of salaries, flexible working arrangements and provision of adequate information contribute to high employee motivation.

6.1.4 Psychosocial Factors and motivation of Healthcare workers

The study concludes that psychosocial factors strongly influence motivation. This study revealed that having good worker-co-worker-supervisor relations, work-life balance, social support as well as employee mental health and wellness was associated with higher motivation levels among HCWs. In addition, the qualitative findings showed that workload and job stress contribute to healthcare workers' motivation and as such, the welfare of HCWs should be addressed in order to increase motivation.

6.2 Recommendations

This study found that motivation is an interplay of complex factors that require a comprehensive approach. It can therefore not be viewed in isolation but requires a multi-sectoral approach to address the various factors associated with motivation. As such, the following recommendations were made based on the findings:

6.2.1 Healthcare Facilities

There is need to ensure good relationships between healthcare workers and with their supervisors, to maintain a healthy work-life balance, to ensure that HCWs have sufficient social support and to prioritize the mental health and wellness of healthcare workers at the facility level. The study recommends that healthcare workers should have manageable workloads as well as flexible working shifts. This, besides reducing burnout, will support healthcare workers to maintain work-life balance and consequently increase their motivation.

6.2.2 The County Government

The County Governments, County Health Management Team (CHMT) and Sub-County Health Management Teams (SCHMT) should put measures in place to ensure conducive working conditions and workplace characteristics for HCWs. These should also address occupational health and safety by providing legal frameworks to safeguard health professionals in their workplace. Provision of adequate resources in the hospitals, health centers and dispensaries in Machakos County will not only ensure that healthcare workers are able to perform their duties optimally but will also serve to motivate HCWs. Manageable workloads, flexible working shifts and timely payment of salaries are all highly recommended to motivate HCWs in Machakos County. Further, it is recommended as a matter of urgency that measures should be put in place to address the critical issue of job stress among HCWs in Mavoko Sub-County, which was shown in this study to emanate mostly from high workload.

6.2.3 National Policies

Through the National Government Administrative Officers (NGAO), the National and County Governments' Ministries of Health are recommended to implement activities that prioritize healthcare workers' mental health and wellness. This includes

implementation of existing policies such as the Kenya Mental Health Policy (2015-2030) and the National Occupational Health and Safety Policy (2012) in public health facilities. This is critical in addressing the environmental and psychosocial factors associated with HCWs' motivation. There is a need to actively and continuously engage HCWs in the development of national policies and the political decision-making process to ensure that their unique needs are addressed.

HCWs should be provided with resources to address the high levels of job stress such as workshops addressing mental health and work-life balance among HCWs in order to create awareness on the causes of job stress and to empower HCWs with strategies to navigate these situations and avoid burnout. Opportunities for professional development to enhance HCWs' skills and to increase their motivation also came out as a clear recommendation from this study. It is important to recognize the humanity of HCWs and create ecosystems that support their holistic wellbeing and allow them to thrive in both their personal and professional lives.

6.2.4 Further Research

This section emphasizes the necessity for additional research to obtain a more comprehensive understanding of the factors that motivate healthcare workers (HCWs).

First, future studies should target other Sub Counties within Machakos to ensure findings that more accurately reflect the entire region. Expanding research to other Counties in Kenya will reveal any regional disparities in motivational factors among HCWs. Comparative studies between HCWs in private and public health facilities could uncover sector-specific motivational factors. Moreover, regional and international studies are essential to broaden the existing knowledge on this topic.

Even though this study did not find any association between climate change and healthcare workers' motivation, it is important to recognize that the study was conducted ten years ago. Over the past decade, the impact of climate change as a threat multiplier for health systems has become increasingly evident, exacerbating existing health challenges and introducing new ones. Consequently, there is a pressing need to revisit this topic to determine if the relationship between climate change and HCW motivation has evolved. Such research will enable us to develop targeted strategies to support and sustain HCWs' motivation and resilience in our rapidly changing environment, ensuring that health systems remain robust and adaptable in the face of ongoing climate challenges

The observation that younger healthcare workers report higher levels of motivation in this study necessitates a deeper investigation into age as a significant factor influencing motivation. Understanding why younger HCWs exhibit higher motivation levels is crucial. This knowledge can inform strategies to enhance the productivity and performance of the entire healthcare workforce. By identifying the key drivers of motivation among younger HCWs, we can develop targeted initiatives to foster similar levels of motivation across all age groups. Ultimately, leveraging the factors that energize younger HCWs can contribute to improved overall job satisfaction, productivity, and the effectiveness of healthcare delivery systems.

It is essential to conduct further studies to identify and prioritize the most influential factors associated with healthcare workers' motivation. A deeper understanding of which specific factors have a stronger association with motivation will provide valuable insights for developing targeted strategies to enhance HCW satisfaction and performance. This focused approach will enable healthcare administrators and

policymakers to allocate resources more effectively and implement interventions that address the most critical determinants of motivation. Ultimately, such informed strategies will help build a more motivated, efficient, and resilient healthcare workforce, leading to improved patient care and health outcomes.

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APPENDICES

Appendix I: Questionnaire for Healthcare Workers

Please read the questions carefully and tick only **one** appropriate answer

SECTION 1: BIO DATA

1. Sex

   Male

   Female

2. Age (Years)

   20-30

   31-40

   41-50

   Over 50

3. Marital status

   Married

   Not married

   Divorced/separated

4. What is your highest education attainment?

   Certificate

   Degree

   Masters

   other

5. How long have you worked in public service (number of years of service)?

   Less than 2

   2 to 5

□5 to 10

□10 to 20

□Over 20

6. Position held currently……

7. Do you have children

□ Yes

□ No

SECTION 2: MOTIVATION LEVEL FOR HEALTHCARE WORKERS (HCWs) IN PUBLIC HEALTH FACILITIES IN MAVOKO SUB-COUNTY

8. Do you enjoy your work?

   Yes [ ]

   No [ ]

9. Currently, how would you describe your level of motivation?

   Very unmotivated [ ]

   Somewhat unmotivated [ ]

   Neutral [ ]

   Somewhat motivated [ ]

   Very motivated [ ]

10. How would you describe your motivation level prior to devolution of health services in 2013 (if you were not working with this organization then, kindly tick 'does not apply')?

    Very unmotivated [ ]

    Somewhat unmotivated [ ]

    Neutral [ ]

    Somewhat motivated [ ]

Very motivated [ ]

Does not apply [ ]

SECTION 3: FACTORS ASSOCIATED WITH MOTIVATION OF HCWs IN MAVOKO SUB-COUNTY

a) Sociodemographic factors

11. In your opinion, are sociodemographic factors associated with the motivation of HCWs in Mavoko Sub-County?

Yes [ ]

No [ ]

b) If yes, please state the extent

No Extent [ ]

Small Extent [ ]

Moderate Extent [ ]

Large Extent [ ]

Very Large Extent [ ]

12. Kindly indicate some of the factors arising within you that motivate you to perform well in your job

……

……

……

……

……

……

……

13. Please express your level of agreement or disagreement with the following statements on the sociodemographic factors associated with motivation of HCWs in Mavoko Sub-County.

Key: SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree

Statement	**1**	**2**	**3**	**4**	**5**
I have a high morale and feel energized at work					
My remuneration motivates me to work					
I report to my job daily with no lame excuses, unless there are unavoidable circumstances					
Career development opportunities motivate me the most					
My supervisors and managers treat me with respect					
The job security in my work is a good attribute to motivate employees					
Periodic salary increase motivates me					

14. Rank the following needs satisfaction factors according to you, from least important (1) to most important (5)

Key 1- Least important, 2-Important, 3- More important, 4-Very important, 5-Most important

Need Description	**Importance(scale of 1-5)**
Need for rewards and recognition for performance and opportunities for job advancement	

Need for more meaningful and challenging work that allows for creativity and sense of sociodemographic fulfillment	
Friendly colleagues, opportunities for interaction with other and team spirit	
Pleasant working conditions, more leisure time, increased salary and avoidance of physical strain or discomfort	
Safe working conditions and fringe benefits such as insurance and retirement plans	

Environmental factors associated with motivation of HCWs in Mavoko Sub-County

15. In your opinion, are environmental factors associated with the motivation of HCWs in Mavoko Sub-County?

    Yes [ ]

    No [ ]

b) If yes, please state the extent

    No Extent [ ]

    Small Extent [ ]

    Moderate Extent [ ]

    Large Extent [ ]

    Very Large Extent [ ]

16. Kindly list some of the legal and political factors associated with motivation of HCWs in Mavoko Sub-County

……

……

……

17. Indicate your level of agreement on the following statement regarding the legal and political characteristics associated with motivation of HCWs in Mavoko Sub-County.

Key: SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree

Statement	**1**	**2**	**3**	**4**	**5**
There are sufficient legal policies safeguarding health professionals					
There is no interference from the political actors such as county assembly and national government at my work					
There is input from labor unions on matters pertaining HCWs wellbeing e.g. nurses' union, doctors. union and other labour unions					
Local political systems influence the running of the health facilities					
The administration supports merit-based systems of promotion					
Occupational health and safety policies and systems are in place at work					
There is an active and effective occupational health and safety committee and / or a responsible officer					
There is regular communication between staff and management regarding safety issues					
Extremes of heat due to climate change affect my motivation at work					

Natural disaster and variable rainfall patterns (scarcity of water/drought) affect my motivation at work					

Health system factors associated with motivation of HCWs in Mavoko Sub-County

18. In your opinion, are health system factors associated with the motivation of HCWs in Mavoko Sub-County?

    Yes [ ]

    No [ ]

b) If Yes, please state the extent

    No Extent [ ]

    Small Extent [ ]

    Moderate Extent [ ]

    Large Extent [ ]

    Very Large Extent [ ]

19. Kindly list some of the work-place characteristics that motivate you to perform well in your job as a healthcare worker:

……

……

……

……

20. Please express the level of your agreement or disagreement with the following statements on the workplace characteristics and working conditions associated with motivation of HCWs in Mavoko Sub-County.

Key: SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree

Statement	**SD**	**D**	**N**	**A**	**SA**
Delays in salary payment affect my motivation at work					
My supervisors provide me with adequate supportive supervision and mentorship					
There is clarity of roles and responsibilities					
I receive adequate information from the management on what is going on in my department					
I am involved in decisions that affect my work					
My compensation matches my responsibilities					
My job description and job requirements are clear to me					
Employee feedback is used to make improvements in my department					
The efficiency and productivity of department satisfies me					
Availability of medical supplies and equipment motivates me					
The level of staffing in my department satisfies me					
I feel that workplace training opportunities encourage me to work better					
Flexibility in working hours motivates me					
I find the health information system (MoH registers and/or Electronic Medical records) to be efficient in data management					

I participate in regular data reviews of the facility data in national health information systems (DHIS)					

Psychosocial factors associated with motivation of HCWs in Mavoko Sub-County

21. In your opinion, are psychosocial factors associated with the motivation of HCWs in Mavoko Sub-County?

    Yes [ ]

    No [ ]

b) If Yes, please state the extent

    No Extent [ ]

    Small Extent [ ]

    Moderate Extent [ ]

    Large Extent [ ]

    Very Large Extent [ ]

22. Generally when I think of the work environment and my job in future, I see

    More positive than negative aspects [ ]

    Neutral [ ]

    More negative than positive aspects [ ]

23. How would you rate your job stress level?

    Mild [ ]

    Moderate [ ]

    Severe [ ]

    Extreme [ ]

24. Does another person you work with cause your job stress?

    Yes [ ]

    No [ ]

25. If your job stress is not caused by another person, it is caused by the:

High workload [ ]

Lack of work-life balance [ ]

The nature of the job and its responsibilities [ ]

Any other, please specify _____

26. To what extent do you agree or disagree with the following statements regarding the psychosocial factors associated with motivation of HCWs in Mavoko Sub-County.

Key: SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree

Statement	**SD**	**D**	**N**	**A**	**SA**
I feel respected and valued at my work					
My co-workers conduct themselves with morale and professionalism					
I am able to maintain a reasonable balance between my family life and work life					
I often experience burn-out at work					
My mental health and overall wellness are well taken care of at work					
My supervisors care about and respond to the issues that are important to me					

Thank you for your participation

Appendix II: IREC Approval

INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE (IREC)

MOI TEACHING AND REFERRAL HOSPITAL
P.O. BOX 3
ELDORET
Tel: 33471/2/3

MOI UNIVERSITY
COLLEGE OF HEALTH SCIENCES
P.O. BOX 4606
ELDORET
Tel: 33471/2/3

Reference: IREC/2020/06
Approval Number: 0003590

21st April, 2020

Dr. Angela Kathure Mule,
Moi University,
School of Public Health,
P.O. Box 4606-30100,
ELDORET-KENYA.

INSTITUTIONAL RESEARCH & ETHICS COMMITTEE
21 APR 2020
APPROVED
P. O. Box 4606-30100 ELDORET

Dear Dr. Mule,

FACTORS ASSOCIATED WITH HEALTH WORKERS' MOTIVATION INMAVOKO SUB COUNTY, KENYA

This is to inform you that ***MU/MTRH-IREC*** has reviewed and approved your above research proposal. Your application approval number is ***FAN:0003590.*** The approval period is ***21st April, 2020 - 20th April, 2021.***

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by ***MU/MTRH-IREC***.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to ***MU/MTRH-IREC*** within 72 hours of notification.
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to ***MU/MTRH-IREC*** within 72 hours.
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to ***MU/MTRH-IREC.***

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Sincerely,

DR. S. NYABERA
DEPUTY-CHAIRMAN
INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE

cc CEO - MTRH Dean - SOP Dean - SOM
Principal - CHS Dean - SON Dean - SOD

Appendix III: NACOSTI Approval

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **475687** Date of Issue: **25/May/2020**

RESEARCH LICENSE

This is to Certify that Dr.. Angela Mule of Moi University, has been licensed to conduct research in Machakos on the topic: Factors Associated with Health Workers\' Motivation in Mavoko Sub-County, Kenya for the period ending : 25/May/2021.

License No: **NACOSTI/P/20/5012**

475687

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearence from relevant Government Agencies
5. The License does not give authority to tranfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
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Website: www.nacosti.go.ke

Appendix IV: Machakos County Approval

REPUBLIC OF KENYA

GOVERNMENT OF MACHAKOS COUNTY
DEPARTMENT OF HEALTH AND EMERGENCY SERVICES
Office of the County Director of Medical Services

Machakos Highway
P.O. Box 2574-90100
Machakos, Kenya
REF: DHES/DMS/RESEARCH/2020/24

Telephone: +254 -44-20575
Fax: 254-44-20655
27th May 2020

Principal Investigator - ATTN: Dr. Angela Mule
Moi University
School of Public Health
ELDORET

Dear Dr. Mule,

RE: LETTER OF AUTHORIZATION FOR CONDUCTING PROPOSED RESEARCH

The Department of Health and Emergency Services, Machakos County is keen to collaborate in your study: **'Factors Associated with Health Workers' Motivation in Mavoko Sub-County, Kenya.'**

Note is taken of the letter of Ethical clearance from Moi University/ Moi Teaching and Referral Hospital Institutional Research and Ethics Committee (IREC) REF IREC/2020/06 dated 21st April 2020 as well as the Research License from the National Commission for Science, Technology & Innovation number NACOSTI/P/20/5012 dated 25th May 2020.

You are hereby authorized to proceed with the research and urged to share the findings with the Department of Health and Emergency Services; Machakos County, through this office.

Sincerely,

Dr. Jonathan Nthusi
County Director – Medical Services

cc: County Executive Committee Member – Health
Chief Officer – Medical Services
Chief Officer – Public Health and Commmunity Outreach
Sub-County Medical Officer of Health, Mavoko Sub-County.

Appendix V: Interview Guide

1. How do you rate the motivation of HCWs working in public health facilities in Mavoko Sub-County? (Key: 1-very unmotivated, 2- somewhat unmotivated, 3-neutral, 4-somewhat motivated, 5-very motivated)
2. In your perspective, which factors mostly motivate the HCWs in Mavoko Sub-County?
3. What strategies has the government put in place to motivate healthcare workers?
4. What policies do you recommend to motivate healthcare workers and as a result improve their performance in the health sector?
5. How do you as a Sub-County manager endeavor to motivate the HCWs in Mavoko?
6. Name some of the sociodemographic factors that are likely associated with motivation of HCWs in Mavoko Sub-County?
7. What are some of the health system factors that are likely associated with motivation of HCWs in Mavoko Sub-County?
8. Kindly state some of the environmental factors that are likely associated with motivation of HCWs in Mavoko Sub-County?
9. What are some of the psycho-social factors that are likely associated with motivation of HCWs in Mavoko Sub-County?
10. Rank the importance of the above factors (sociodemographic, environmental, health system and psychosocial factors) in their association with motivation of HCWs in Mavoko Sub-County (1- least important, 2- important, 3-more important, 4 very important)

Appendix VI: List of Mavoko Sub-County Health Facilities

Public Health facilities

1. Athi River Level 4 Hospital
2. Mlolongo Health Centre
3. Kyumbi Health Centre
4. Kinanie Model Health Centre
5. Kwa Kalusya Dispensary
6. Katani Dispensary
7. Sikia Dispensary
8. Mlolongo Wellness Centre