

## Influence of management commitment to occupational safety and health-OSH on service delivery in level 4 public hospitals in Kisii County, Kenya

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### ABSTRACT

The safety and health of healthcare workers are fundamental to the effective delivery of medical services. The public expects these professionals to provide accessible, affordable, and high-quality care within hospital environments that are free from occupational injuries and illnesses. However, in many developing countries, the quality of healthcare service delivery remains unacceptably poor. The purpose of this study was to establish the influence of management commitment to occupational safety and health on service delivery in level 4 public health facilities in Kisii County, Kenya. The overarching theoretical framework guiding this study was the Social Exchange Theory, which posits that human behaviour is driven by a cost-benefit analysis, where individuals are motivated by the perceived rewards, whether tangible or psychological, relative to the costs incurred. In the context of this study, the theory posits that healthcare service delivery is shaped by the presence of rewards and inducements, particularly safe working conditions and psychosocial support, which enhance healthcare workers' performance, ultimately improving the quality of service delivery. The study findings would be significant to the management of healthcare facilities for manipulating occupational safety and health practices, guaranteeing enhanced quality of working life and service delivery. The study adopted a cross-sectional survey research design that did not involve manipulation of variables. It targeted 521 healthcare workers providing medical services in level 4 public health facilities located in Kisii County and patients seeking medical services in these facilities. Proportionate stratified random sampling and purposive sampling were used to select a sample of healthcare workers, while patients were selected using convenience sampling. Primary data was collected using semi-structured questionnaires and interviews. Data was analysed using descriptive statistics, correlation, simple hierarchical regression and multiple hierarchical regression analyses. The study established that safety policy implementation has a moderating effect on the association between management commitment and service delivery ( $F(3, 11) = 13.593, p = .012$ ;  $t(13) = 2.475, p = .017$ ). Further, it reveals that both management commitment to occupational safety and health and psychosocial support are significant predictors of service delivery in level 4 public hospitals in Kisii County. The study recommends that the hospital management prioritise the effective implementation of Occupational Safety and Health (OSH) policy as a strategic approach to strengthen safety and health practices, thereby enhancing service delivery.

**Keywords:** Management Commitment, Occupational Safety Health, Service Delivery, Kisii County, Kenya

### I. INTRODUCTION

The well-being and safety of healthcare workers are fundamental to the sustained, efficient, and high-quality delivery of health services (Adepoju & Esan, 2023). In healthcare settings, where exposure to occupational hazards is routine, the adoption of comprehensive Occupational Safety and Health (OSH) practices is indispensable. Such practices not only uphold workers' rights but also contribute to enhanced service delivery (Mujtaba et al., 2023). Globally, formal OSH regulation is a relatively recent phenomenon, gaining momentum during the Industrial Revolution in Europe. At that time, poor working conditions led to widespread worker mobilization demanding institutionalized protection (International Labour Organization [ILO], 2020). By the 18th century, over 50 occupations had documented health risks, reinforcing the need for legal OSH frameworks. Governments responded by enacting safety legislation, notably the UK's Factory Inspectorate Act of 1883, which formalized workplace safety oversight (Hale & Booth, 2023). The global recognition of OSH in the 1970s marked a pivotal shift toward safeguarding worker well-being and enhancing productivity, particularly in critical sectors like healthcare. In this context, OSH regulation emerged as a fundamental pillar for protecting frontline health workers, thereby ensuring safe, continuous, and patient-centered service delivery.

The Occupational Safety and Health (OSH) Act was enacted in the United States in 1970 to establish and enforce workplace health and safety standards, and to create the Occupational Safety and Health Administration (OSHA) to oversee compliance (OSHA, 2011). Following this, countries such as the United Kingdom, Canada, Norway, and Sweden adopted similar legislation to promote safe and healthy work environments and prevent occupational injuries (Vassie & Lucas, 2001). In Canada, employers are legally required to implement workplace safety and health programs

(Alli, 2020). At the global level, International Labour Organization (ILO) instruments call for adequate protection of workers' health and safety across all occupations. These instruments provide comprehensive principles, standards, and technical guidance for the establishment and management of effective OSH systems (ILO, 2020; Alli, 2020). Occupational Safety and Health (OSH) is now recognized as a critical component of workplace management across many countries. In Kenya, the OSH Act was enacted in 2007 to institutionalize workplace safety. However, OSH policy implementation remains inadequate in many developing countries (Governance and Oil, Gas and Sustainable Natural Resources Network [GOSHNET], 2021), despite increased global awareness. Its influence on the association between OSH practices and healthcare service delivery also remains insufficiently explored. Healthcare workers in these contexts, including Kenya and specifically Kisii County, continue to face numerous occupational hazards resulting in injuries, illnesses, absenteeism, and diminished work capacity (Alli, 2020; Okoth-Okelloh & Ouma, 2020).

Occupational Safety and Health (OSH) practices play a critical role in preserving human resources by protecting employees from both emerging and existing workplace hazards (Alli, 2020; Kendall, 2005). By enforcing safety regulations and identifying potential risks, OSH practices reduce workplace accidents, injuries, and illnesses (Bhagawati, 2015). This, in turn, minimizes absenteeism and enhances productivity and efficiency (Alowo et al., 2022). Consequently, there is a strong link between effective OSH practices and improved service delivery (Bhagawati, 2015). In light of the poor service delivery reported in level 4 healthcare facilities in Kisii County (Nyamboga et al., 2020), examining the role of OSH practices in such settings is both timely and necessary. From this perspective, OSH practices represent a form of benefit that motivates employees to reciprocate with improved performance and service quality. Therefore, the more robust and supportive the OSH measures, the greater the likelihood of enhanced healthcare service delivery, as staff perceive these practices as valuable contributions to their well-being and professional environment. An increasing body of evidence indicated that public health facilities in Kenya operate under elevated occupational safety and health (OSH) risks, thereby exposing healthcare workers to a wide range of occupational hazards (MoH, 2020). The World Health Organization and the International Council of Nurses have highlighted that Kenya records disproportionately high rates of needle-stick injuries and related occupational exposures (Susan & Gerry, 2004).

Among these facilities, Kenya Essential Package for Health (KEPH) Level 4 hospitals have been identified as the most at risk, exhibiting widespread non-compliance with statutory OSH regulations (MoH, 2020). Regional disparities are evident, with Kisii County ranking among the poorest in OSH performance. Notably, approximately 12.86% of healthcare workers in Kisii County have reported contracting work-related illnesses and injuries (Kisii County Health Department, 2020). An OSH baseline survey classified level 4 facilities in the county as nearing a state of severe non-compliance, calling for urgent systemic reforms (MoH, 2020). These OSH challenges have been compounded in the post-COVID-19 period by persistent inefficiencies in service delivery, including extended patient waiting times, inadequate operational funding, a low healthcare worker-to-patient ratio, and chronic shortages in essential drugs and infrastructure maintenance (Ombaka & Machira, 2022; Oirere, 2019). These circumstances underscored the necessity of investigating the relationship between OSH practices and healthcare service delivery, with particular focus on Level 4 hospitals in Kisii County.

### 1.1 Statement of the Problem

Occupational Safety and Health (OSH) practices are globally, regionally, and nationally acknowledged as fundamental to enhancing service delivery in healthcare facilities. Organizations such as the International Labour Organization (ILO), the World Health Organization (WHO), and the Government of Kenya underscore the importance of key OSH practices—including occupational risk management, safety training, management commitment to OSH, and psychosocial support—as vital for protecting healthcare workers and enabling them to deliver quality services. In Kenya, the enactment of the OSH Act of 2007 aimed to institutionalize these practices across all workplaces, particularly in the health sector, with the goal of fostering a safe, healthy, and motivated workforce capable of providing timely, accessible, and high-quality care.

Ideally, effective implementation of OSH policy in public hospitals should ensure safe working environments that mitigate occupational risks, reduce absenteeism, and enhance staff morale and productivity. These improvements are expected to positively influence healthcare service delivery by increasing efficiency, improving patient satisfaction, and ensuring the consistent availability of essential services. In practice, however, level 4 public hospitals in Kisii County continue to experience significant challenges in both OSH compliance and healthcare service delivery. These facilities are often characterized by long queues, extended patient waiting times, overcrowding, frequent complaints about the quality of care, and persistent shortages of critical medical supplies. Simultaneously, healthcare workers face escalating occupational health risks, including injuries, illnesses, burnout, and absenteeism—challenges that were further intensified during outbreaks of highly infectious diseases such as COVID-19 and SARS.

This situation reveals a marked discrepancy between the expected outcomes of OSH policy implementation and the actual conditions within these hospitals. Despite the presence of a supportive legislative framework and international best practices, the anticipated improvements in worker safety and service delivery have not been fully achieved. It is

within this context that the present study seeks to examine the influence of OSH practices on healthcare service delivery, with particular attention to the moderating role of OSH policy implementation in level 4 public hospitals in Kisii County, Kenya.

### **1.2 Research Objective**

To establish the influence of management commitment to OSH on service delivery in level 4 public hospitals in Kisii County.

### **1.3 Research Hypothesis**

Management commitment to OSH has a significant influence on service delivery in level 4 public hospitals in Kisii County.

## **II. LITERATURE REVIEW**

### **2.1 Theoretical Review**

#### **2.1.1 Job Demand-Control-Support Theory**

Robert Karasek's proposed the Job Demand-Control (JDC) theory in 1979, which asserts that jobs involving high demands and low levels of control referred to as high-strain jobs—are likely to result in elevated stress and negative health outcomes due to prolonged mental exertion and limited coping capacity (Karasek, 1979). This framework was later extended into the Job Demand-Control-Support (JDCS) model by Karasek and Theorell (1990), adding workplace social support as a critical component. According to this enhanced model, jobs marked by high demands, limited control, and minimal support termed iso-strain jobs pose the greatest risk to worker well-being. In contrast, roles with high demands, substantial control, and strong support active jobs are associated with improved health and enhanced performance (Karasek & Theorell, 1990).

In the context of this study, the JDCS model implies that healthcare workers (HCWs), particularly during emergencies, often face intense job demands with little control, increasing their vulnerability to occupational stress and related health issues. The expanded model highlights the critical role of integrating comprehensive social support systems including collegial support, counseling services, and harmonious workplace relationships alongside appropriate levels of job control to enhance mental well-being and improve the effectiveness of healthcare service delivery.

### **2.2 Empirical Review**

Effective OSH practices also consist of management commitment. Nyamboga, et al. (2020) note that management commitment exists when all members of the management team share a unified way of thinking about safety and incorporate that way of thinking into their daily decisions. Several studies have shown that there is an association between management commitment and service delivery, even management commitments in aspects other than OSH.

Getanda (2022) carried out a study to examine how Occupational Safety and Health (OSH) management affects service delivery at Nakuru Water and Sanitation Services Company. The study focused on four main objectives: evaluating the impact of management's commitment to OSH on service delivery; analyzing the effect of risk and hazard assessments; investigating the role of providing personal protective equipment (PPE); and assessing the influence of safety training on service delivery. A descriptive survey research design was employed, targeting all 335 technical staff at the company. A sample of 77 employees was chosen through stratified random sampling. Data collection was done using self-administered questionnaires, and the analysis involved both descriptive statistics (mean, standard deviation, frequencies, and percentages) and inferential statistics (correlation and regression analysis). OSH management practices were defined by four elements: management commitment, risk and hazard assessment, PPE usage, and safety training, while service delivery was measured in terms of efficiency, responsiveness to customer complaints, and tangibility. The findings showed that management's commitment to OSH had a significant and positive impact on service delivery. Additionally, the provision of PPE and safety training were also positively correlated with improved service delivery. However, risk and hazard assessments did not show a significant association with service delivery, moreover, the study was based in a water company which is privately run, there is need to carry out a survey in a public institution to bring out the perspectives from a different work culture.

Onwudiwe et al. (2018) explored how Occupational Safety and Health (OSH) management affects organizational productivity. Their study focused on two aluminium manufacturing companies in Owerri, Imo State, and involved top-level managers, line supervisors, and factory staff. Using a descriptive survey approach, they administered a 16-item questionnaire to 40 deliberately selected respondents with relevant knowledge of the topic. Data were analyzed using both descriptive and inferential statistics. OSH management was defined in terms of safety and health policy implementation and training. Productivity indicators included operating costs and employee output. The results

indicated a significant positive correlation between OSH policy implementation and productivity, as well as between safety training and employee output.

In a related study, Eke-Bethel and Tamunomiebi (2019) examined the link between safety management and job performance among employees in manufacturing companies located in Rivers State. The research utilized a survey design, targeting a population of 504 workers across 16 selected manufacturing firms. A stratified random sampling method was employed to select a sample of 223 respondents. Data collection and analysis involved both descriptive statistics (mean and standard deviation) and inferential statistics (correlation and regression), with hypotheses tested at a 0.05 level of significance. The study found a significant relationship between management's commitment to occupational safety and health (OSH) and employee job performance in the manufacturing sector in Rivers State. Nee and Remendran (2021) investigated the effect of occupational safety practices on healthcare quality. Their exploratory study targeted doctors across four Malaysian states—Melaka, Penang, Perak, and Selangor—selecting 175 participants based on their education and exposure to occupational hazards. Safety practices were measured through indicators such as management commitment, employee safety behaviour, and training. Healthcare quality was assessed via responsiveness, empathy, and accessibility. Findings revealed a strong, positive correlation between management commitment and quality healthcare delivery. These studies failed to specify the methods and direction of OSH and whether it can be applied in all instances in an environment with varying institutional dynamics, further, these studies were done in the private entities which experiences contrasting challenges and risks, the current study focused on Service delivery in public institutions.

Several researchers have connected management commitment to service delivery outcomes, including commitments beyond occupational safety and health (OSH). For instance, Getanda (2022) explored how OSH management influences service delivery in Nakuru's water and sanitation service companies. The study aimed to assess the impact of management's dedication to safety and health on service provision. Using a descriptive survey design and a sample of 77 technical staff, the study found that management's commitment to OSH significantly and positively affected service delivery, with the availability of personal protective equipment (PPE) showing a positive correlation. Similarly, Onwudiwe et al. (2018) examined the impact of OSH management on organizational productivity through a descriptive survey involving 40 participants, including top management, line managers, and factory staff from two companies. A 16-item questionnaire revealed a significant link between the implementation of OSH policies—considered an indicator of management commitment—and organizational productivity. These findings suggest that management commitment has a substantial effect on service delivery, as reflected in productivity outcomes. Linda et al. (2020) carried out research examining how health and safety management practices influence employee job performance. The study adopted a cross-sectional survey approach and focused on five bottled and sachet water companies in Ghana. A convenience sampling method was used to select 150 participants. Data collection was done using a structured questionnaire, and the data were analyzed through both descriptive and inferential statistical methods. The findings indicated a positive and significant link between occupational safety and health (OSH) management practices and job performance. Specifically, the independent variables—hazard management, job stress, management commitment, and safety training—were all found to have a significant and positively associated with employee job performance. Though these studies were carried out in different geographical locations, the samples used were inadequate, additionally, cross-sectional surveys have a tendency of excluding crucial components of targeted population, and this may render the results inconclusive.

Eke-Bethel and Tamunomiebi (2019) further confirmed a positive link between management commitment and job performance in Rivers State manufacturing firms. Similarly, Nee and Remendran (2021) demonstrated that management commitment positively influences healthcare quality in Malaysia. In contrast, Sinollah and Achmad (2022), who studied healthcare management and control in Oklahoma facilities, found a positive relationship between these variables and service delivery, though the study did not specifically focus on management commitment. Collectively, these studies affirm that management commitment is positively associated with both service delivery and job performance across various sectors, including healthcare, manufacturing, and utilities. This supports the hypothesis that management's dedication to OSH significantly impacts performance outcomes. Muah et al. (2021) investigated how management safety practices affect job safety and performance in Ghana's mining sector. Using a descriptive cross-sectional survey, they selected 400 employees from three major gold mining firms using cluster and convenience sampling. Their analysis revealed that management commitment, risk management, and PPE provision all had significant positive effects on job safety and performance. These studies provide strong support for the link between management commitment and service delivery. Notably, research by Nee and Remendran (2021) focused on healthcare facilities. Nee and Remendran (2021) specifically examined management commitment, whereas Amer (2021) used control as an indicator of occupational safety and health (OSH). These same variables will be explored in the present study, making their findings directly relevant to the study's hypothesis. Additionally, although Getanda (2022) concentrated on water and sanitation service providers, his research also addressed management commitment. Similarly, Eke-Bethel and Tamunomiebi (2019) while focusing on manufacturing firms, investigated management's commitment

to OSH. Collectively, these studies reinforce the significance of management commitment in influencing service delivery across various organizational settings, including healthcare, however, it is not clear if the control used as an indicator to check occupational safety and health (OSH) and service delivery is appropriate, this may compromise the final outcome and might not yield conclusive results. The current study purposively sampled health workers in public health institutions to solicit expert views on the variables under investigation to come out with clear results.

Muah et al. (2021) explored how management safety practices affect job safety and employee performance. The research employed a descriptive cross-sectional survey design and relied primarily on questionnaires for data collection. Cluster sampling was used to categorize mining companies in Ghana, guided by a list from the Ghana Minerals Commission, which oversees mining activities. Additionally, three major gold mining companies were purposively selected based on their long-standing operations and gold output. The study aimed to reach a target population of 6,000 employees. From this pool, 400 employees from various departments were conveniently sampled based on their availability. Data collection involved self-administered questionnaires, and the results were analyzed using both descriptive and inferential statistics. To identify key safety practices and programs, the study employed correlation, simple regression, and multiple regression analyses. The results indicated that management commitment, risk management, and the provision of personal protective equipment (PPE) were significantly linked to job safety and employee performance. Overall, the study found a positive and significant relationship between safety practices and job performance.

### III. METHODOLOGY

Simple and multiple hierarchical linear regression models were used to: pinpoint the key occupational safety and health (OSH) practices shaping service delivery in Level 4 public hospitals; measure the magnitude of each practice's influence; and assess whether OSH policy implementation moderates the link between those practices and service delivery.

The choice to use hierarchical regression models was based on the study's aim to assess how occupational safety and health (OSH) practices impact service delivery in level 4 hospitals within Kisii County. Since the study did not involve experimental manipulation, regression analysis was the appropriate method for evaluating these influences. It was essential to determine the individual effect of each OSH practice on service delivery in public level 4 hospitals. This formed the basis of the study's first four objectives. In the initial stage, the basic model examined the direct relationship between each OSH practice (as the predictor) and service delivery (as the outcome variable). The statistical significance of each OSH practice's regression coefficient was evaluated within the basic model. This allowed for the prediction of the dependent variable—service delivery—using a single independent variable, namely OSH practice, following the general regression model:

$$Y^I = \beta_0 + \beta_1 X + \varepsilon \dots (1);$$

Where  $Y^I$  represents the predicted value of the dependent variable (service delivery),  $\beta_0$  is the regression constant,  $\beta_1$  is the standardized coefficient of the independent variable (OSH practice),  $X$  denotes the independent variable, and  $\varepsilon$  is the error term.

#### 3.1 Reliability of Research Instruments

Reliability refers to the consistency and stability of a measurement tool over time, specifically, its ability to produce similar outcomes when used at different points in time (Oluwatayo, 2020). In quantitative research, it is closely associated with terms like dependability, consistency, and the ability to replicate results across different times, instruments, and respondent groups (Kendall, 2005). A reliable measurement is one that is free from bias or error, ensuring uniform results across time and across different components of the instrument (Sekaran & Bougie, 2020). In this study, reliability was assessed using the test-retest method and Cronbach's alpha.

In the test-retest approach, identical instruments were given to the same group on two separate occasions. The primary challenge with this method lies in determining the appropriate time gap between the two administrations (Kothari & Gaurav, 2019). If the second test is conducted too soon, participants might remember their previous answers, leading to an inflated reliability coefficient. On the other hand, if the interval is too long, participant maturation may occur, introducing confounding variables (Muah et al., 2021). Maturation involves natural changes in participants over time that could affect the study's outcomes. In this research, the instruments were administered again after two weeks, following the recommendation of Sekaran and Bougie (2020).

The responses from the two administrations were scored and correlated in order to obtain a reliability coefficient as the measure of reliability. Initially, the researchers distributed the instruments to a randomly selected group of 30 participants employed at a Level 5 hospital in Kisii County. Once completed, the instruments were collected and all responses were coded as 1. The total score for each participant was calculated by summing the coded responses on each instrument, resulting in a score of 89 per respondent. Therefore, at this point, the study had 30 identical scores of 89.

Secondly, after a period of 14 days, the same set of instruments was given again to the same group of 30 respondents. The responses were then collected and coded in a way that, for each respondent, a repeated response to the same item (identical to their first response) was assigned a code of 1, while a different response to the same item was assigned a code of 2. The scores of each respondent were determined by adding the codes on each questionnaire. This produced a score of 89 if a respondent answered in exactly the same way in the re-test as in the test administration, and 178 if the respondent answered differently in all the items. Thus at this stage the researchers had 30 scores of between 89 and 178. The reliability of the instruments was calculated using the formula shown below;

$$R = 1 - \left( \frac{\sum T_2 - \sum T_1}{\sum T_1} \right) = 1 - \left( \frac{3107 - 2670}{2670} \right) = 0.836$$

Where  $T_1$  = time 1 scores and  $T_2$  = time 2 scores (Oso & Onen, 2009).

A test-retest reliability score of 0.836 was recorded, indicating that at least 8 out of every 10 items in the instrument yielded consistent responses over time. This level of reliability is considered acceptable, as it exceeds the 0.70 threshold commonly recommended for social science research by Hamed (2020) and Oso (2016). To assess internal reliability, Cronbach's alpha was employed. This statistic evaluates the degree to which the items within the instrument are positively correlated, serving as a measure of internal consistency. It reflects the average of all possible split-half reliability coefficients and is calculated based on the average inter-item correlations for the construct being measured (Riak & Bill, 2022). A low Cronbach's alpha may indicate that the test is too brief or that the items are not closely related (Drost, 2011). In this study, a Cronbach's alpha of 0.808 ( $\gamma = .806$  for standardized items) was obtained, signifying that at least 8 out of every 10 items measured the same underlying concept. This value is also considered acceptable, surpassing the 0.70 benchmark typically used in social science research (Babbie, 2014).

### 3.2 Sample Size and Sampling Procedures

A total of 527 respondents participated in the study, comprising 227 healthcare workers and 300 patients drawn from 15 level 4 health facilities located in Kisii County. These health facilities are Gesusu, Riana, Masimba, Ogembo-gucha, Kiogoro, Nyamasibi, Keumbu, Etago, Marani, Iyabe, Kenyenyia, Nyamache, Ibeno, Nduru and Ibacho. The sample size for the healthcare workers was calculated using Yamane's (1967) sample size determination formula, based on a 5% margin of error and a 95% confidence level.

$$n = \frac{N}{1 + Ne^2} \dots (3)$$

Where  $n$  = sample size,  $N$  = population size, and  $e$  = margin of error.

$$\text{sample size} = \frac{521}{1 + 521(.05)^2} = 227$$

The study sample was chosen using a combination of proportionate stratified random sampling, purposive sampling, and convenience sampling methods. It consisted of 227 healthcare workers and 300 patients. The sample of healthcare workers comprised of 75 heads of units and 152 other healthcare staff selected at random. The 75 key informants were the medical superintendent, head of medical officers, head of clinical officers, head nurse and head of laboratory department in each of the 15 hospitals. They were selected because being heads of units; they have unique information on OSH practices and service delivery which may not be available to the rest of the staff. Hence the medical superintendents, heads of medical officers, heads of clinical officers, head nurses and heads of laboratory department were selected by purposive sampling so that they could bring in information which would otherwise not be available to the researchers.

The remaining 152 healthcare workers were chosen using a proportionate stratified random sampling method, with the sampling frame drawn from each hospital. This approach is typically employed in diverse populations to form uniform subgroups with shared characteristics (Saunders et al., 2020). The proportionate aspect of the method was used to establish the number of staff from each hospital category to be included in the sample. In proportionate stratified random sampling, individuals are selected from each subgroup in proportion to their representation in the overall population (Cooper & Schindler, 2011). For instance, the number of nurses included in the sample was calculated as follows:

$$n_n = \frac{p_n}{N} * n \dots (4)$$

Where  $n_n$  = sample size for nurses;  $p_n$  = population of nurses in the population;  $N$  = total effective population;  $n$  – total required sample size. This produced,

$$\text{Nurses} = \frac{205}{446} * 152 = 70$$



Using this method, the sample distribution shown in Table 1 was derived.

**Table 1**  
*Summary of Sample Allocation in Kisii County's Level 4 Hospitals*

Staff category	N	KI	Effective population	Stratified sample	Total sample
Med. Superintendents	15	15	0	0	15
Med. Officers	50	15	35	12	27
Clinical Officers	156	15	141	48	63
Nurses	220	15	205	70	85
Lab. Tech.	80	15	65	22	37
<b>Total</b>	<b>521</b>	<b>75</b>	<b>446</b>	<b>152</b>	<b>227</b>

The number of healthcare workers from each hospital was determined using proportionate stratified sampling. For example, the number of nurses from hospital six ( $n_6$ ) was obtained as follows;

$$n_6 = \frac{p_{n6}}{N_6} * s_6 \dots (5)$$

Where  $n_6$  = sample size for nurses in hospital-6;  $p_{n6}$  = population of nurses in hospital-6;  $N_6$  = total effective population of hospital-6;  $s_6$  – total required sample size for hospital-6.

Using the chosen approach, the necessary sample distribution across different facilities was gathered. Stratified random sampling was employed to guarantee that all key subgroups within the population were included in the sample. This method ensured better representation of each significant segment, resulting in more detailed and meaningful data compared to what would be obtained through simple random sampling.

The patient sample was chosen using a convenience sampling approach. According to Saunders et al. (2020), this non-probability method involves selecting participants based on their ease of accessibility to the researchers. Convenience sampling is often used when other types of sampling methods are hard or impossible to use especially due to lack of sampling frame (Harper & Philo, 2016). In this study, a sampling frame of patients did not exist and it was not possible to construct. The only option available to the researchers was to select patients at the spur of the moment, on first come first served basis until the desired sample size was attained. At least 20 patients were selected from each hospital. 5 patients were selected from each of these sections: outpatient, wards, laboratory and doctors/clinical officers' waiting bay. This produced a sample of at least 300 patients. All adult patients seeking medical services and were not critically ill at the time of the study were selected for inclusion. Patients seek medical services hence they are better placed to assess various aspects concerning healthcare services that are delivered in level 4 facilities. These aspects include: accessibility and affordability of these services, healthcare workers' responsiveness to patients needs and quality of services that are offered.

### 3.3 Validity of Research Instruments

Validity refers to how accurately a research instrument measures what it is intended to measure, or how well an empirical measure reflects the true meaning of the concept being studied (Babbie, 2014). In research, it is essential that indicators accurately capture the variables they are designed to represent, and that items in an instrument comprehensively cover the concept's domain (Haradhan, 2017). To assess content validity, the expert judgment method was employed, involving two specialists. According to Sekaran and Bougie (2020), a group of knowledgeable evaluators can verify the content validity of research tools. Each expert rated the relevance of individual items in the instrument on a four-point scale: 1 = Not Relevant, 2 = Somewhat Relevant, 3 = Quite Relevant, and 4 = Very Relevant. The Content Validity Index (CVI) was then calculated accordingly:

$$CVI = \frac{n_{3/4}}{N} \dots (7)$$

Where  $n_{3/4}$  represents the number of items both judges rated as either quite relevant or very relevant, and  $N$  denotes the total number of items evaluated. The outcomes are presented in Table 2.

**Table 2**  
*Tools Validity Assessment*

		<b>Judge 2</b>				
		1	2	3	4	<b>Total</b>
<b>Judge 1</b>	1	1	1	3	2	<b>7</b>
	2	1	2	3	3	<b>9</b>
	3	0	0	18	22	<b>40</b>
	4	0	0	20	13	<b>33</b>
<b>Total</b>		<b>2</b>	<b>3</b>	<b>44</b>	<b>40</b>	<b>89</b>

A Content Validity Index (CVI) of 0.820 was reported, based on scores of 73 and 89. This indicates that, on average, at least 8 out of every 10 items in the instrument effectively measured the intended concept. This level of validity is considered acceptable, as it exceeds the minimum threshold of 0.70 commonly used in social science research (Oso & Onen, 2009). Construct validity reflects the extent to which a researcher effectively translates a theoretical concept, or construct, into a practical and measurable form—also known as operationalization (Hamed, 2020; Trochim, 2020). This involves defining concepts in ways that align with empirically supported theories (Cooper & Schindler, 2011). In this study, construct validity was ensured by grounding the selected measures and variables in established theories and previous empirical research.

### 3.4 Data Types

The study gathered both quantitative and qualitative data. Primary data was obtained directly from healthcare workers involved in OSH practices, policy implementation, and service delivery in level 4 public hospitals in Kisii County, as well as from patients receiving care at these facilities. This data was collected firsthand from individuals actively engaged in occupational safety and health (OSH) activities and from patients using hospital services. As original, firsthand information, the primary data accurately reflected the actual state of OSH practices, policy implementation, and service delivery within these hospitals.

Qualitative data was gathered through semi-structured interviews with five key healthcare personnel from each level 4 public hospital. These individuals included the medical superintendent, the head of medical officers, the head of clinical officers, the head nurse, and the head of the laboratory department. The semi-structured interview format followed a general set of guiding questions but allowed for adaptability and follow-up based on participants' responses. This approach enabled the researchers to capture detailed insights into the characteristics of OSH practices, the implementation of OSH policies, and service delivery, as perceived by individuals with specialized knowledge in these areas within each hospital.

Quantitative data was gathered from medical officers, clinical officers, nurses, and laboratory technologists who did not hold leadership positions. This data allowed the researchers to present numerical representations of occupational safety and health (OSH) practices and their connection to service delivery, as well as to develop models illustrating these relationships. By combining both qualitative and quantitative data in the study, the researchers were able to offer a more comprehensive understanding of OSH practices and their link to service delivery than would have not been possible using only one type of data.

### 3.5 Data Analysis

The research involved the collection of both quantitative and qualitative data, necessitating a mixed methods approach for analysis. The data was first organized, verified for completeness and consistency, and then systematically categorized to align with the various aspects of the study. Quantitative data was examined through both descriptive and inferential statistical methods. Descriptive statistics, particularly percentages, were employed to summarize patterns and trends related to Occupational Safety and Health (OSH) practices. This approach allowed the researchers to gain insight into the fundamental attributes of OSH practices and to illustrate how management commitment impacted service delivery.

OSH practices were conceptualized as risk management, management commitment to OSH, and psychosocial support. These were further operationalized into subsidiary indicators. Respondents provided their level of agreement with various statements related to the component using a five-point Likert scale: Strongly Agree, Agree, No Comment, Disagree, and Strongly Disagree. The responses were scored, aggregated and coded. Service delivery was measured from accessibility, affordability, responsiveness and quality of services. Respondents reacted to several statements intended to measure the degree of accessibility, affordability, responsiveness and quality of service by indicating strongly agree 5, agree 4, no comment 3, disagree 2 and strongly disagree 1. The scores were added to obtain a minimum possible of 10 and a maximum possible of 50. The scores were expressed as a percentage of 50 to obtain a minimum possible of 20.0% and a maximum possible of 100.0%.

Service delivery was measured from accessibility, affordability, responsiveness and quality of service. Participants responded to a series of statements designed to assess accessibility, affordability, responsiveness, and service quality. They rated each statement on a scale from 1 to 5, where 1 indicated "strongly disagree" and 5 indicated "strongly agree." The total scores ranged from a minimum of 10 to a maximum of 50. The scores were expressed as a percentage of 50 to obtain a maximum possible of 20.0% and a maximum possible of 100.0%.

## IV. FINDINGS & DISCUSSION

### 4.1 Findings

To establish the influence of management commitment to occupational safety and health on service delivery in level 4 public health facilities in Kisii County, a descriptive analysis was carried out to summarize the general characteristics of the sample under study. This involved the use of percentages, frequencies, arithmetic means, and standard deviations. The descriptive analysis served as a preliminary step that guided the application of inferential statistics, which included correlation analysis, simple hierarchical linear regression, and multiple hierarchical regression analysis.

Management commitment to OSH was investigated as one of the practices of OSH. It was measured from investment in OSH, safety audits, provision of safety facilities and holding safety meetings. Participants were asked to respond to various statements related to these variables, and their answers were used to assess the level of management commitment and the quality of service delivery. Descriptive information on management commitment to OSH is summarized in Table 3.

**Table 3**

*Descriptive Information on Management Commitment to OSH*

Item	Strongly Disagree	Disagree	No comment	Agree	Strongly Agree	Total	Mean	Std. dev.
Allocation of resources	4 (1.9%)	157 (74.1%)	35 (16.5%)	15 (7.1%)	1 (0.5%)	212	2.301	0.648
Infrastructural design	0 (0.0%)	15 (5.7%)	63 (35.8%)	118 (45.3%)	16 (0.0%)	212	3.637	0.733
OSH audits and inspections	56 (26.4%)	103 (48.6%)	42 (19.8%)	8 (5.2%)	0 (0.0%)	212	1.981	0.925
Provision of PPEs	0 (0.0%)	20 (9.4%)	50 (23.6%)	125 (59.0%)	17 (8.0%)	212	3.655	0.742
Provision of safety facilities	3 (1.4%)	3 (1.4%)	70 (33.0%)	121 (57.1%)	15 (7.1%)	212	3.670	0.708
Safety committees	0 (0.0%)	60 (28.2%)	63 (29.4%)	81 (38.1%)	7 (3.8%)	212	3.164	0.773

The allocation of financial and material resources by the management to support OSH practices was rated poorly. A substantial majority of respondents (74.1%) indicated that the management does not adequately allocate financial and material resources to support OSH practices, suggesting a lack of sufficient investment in employee safety. Table 4 shows that inadequate resources are provided for OSH since only 7.6% of the respondents in the study (7.1% agreed; 0.5% strongly agreed) indicated that adequate resources are provided by the management for OSH practices. Nevertheless, qualitative data attributes inadequate financing to limited allocation of resources by the Ministry of Health. A significant proportion of the respondents (45.3%) indicated that the design of infrastructure in level 4 health facilities guarantees safety and proper ventilation. Qualitative data revealed that appropriate consideration was made for equipment layout within the facility. Further, it showed that special equipment requirements were considered during facility design such as bio safety cabinets. Additionally, human flow and the direction of gaseous flow were considered during the design stage. However, 35.8% of the respondents did not comment on the item regarding infrastructural design. This could be attributed to inadequate engineering know how necessary to understand issues related to engineering design.

The other aspects of management commitment to OSH that were investigated were safety inspections, provision of PPEs or safety facilities, and holding safety committees. Table 4 shows that OSH audits and inspections are not conducted regularly. The majority of respondents (159 individuals, or 75%) either disagreed or strongly disagreed with the statement that management regularly conducts OSH audits and inspections. This could imply that safety violations and non-compliance may remain undetected since inspections are not regularly conducted. However, the management provides PPEs such as gloves, earmuffs, safety footwear, aprons and masks as indicated by majority of the respondents. Most respondents (142, 67%) reported that the management provides PPEs required to perform their duties. Safety



facilities such as segregation bins, hand washing sinks, cabinets and firefighting equipment are provided and maintained as reported by most respondents (121, 57.1%). The responses in table 4 also indicate that safety committees hold regular meetings as reported by 41.5% of the respondents. These findings suggest that while some aspects of management commitment, such as the provision of safety facilities, are relatively strong, other aspects, such as resource allocation and the conduct of safety audits, require significant improvement.

The study performed a regression analysis to examine the influence of management commitment and the implementation of Occupational Safety and Health (OSH) policy on service delivery, aiming to determine whether management commitment has a significant influence on service delivery in the healthcare facilities under investigation, and whether this relationship is moderated by OSH policy implementation. The null hypothesis proposed that management commitment to OSH does not significantly predict service delivery in these hospitals and that OSH policy implementation does not moderate this relationship. This was tested against the alternative (research) hypothesis. Statistically, the study evaluated the following hypothesis:

OSH policy implementation does not significantly moderate the regression of service delivery on management commitment to OSH in level 4 public hospitals in Kisii County.

$$H_{03}: R_{SVD}^{MCM*OSP*MCM\_OSP} = 0$$

$$H_{a3}: R_{SVD}^{MCM*OSP*MCM\_OSP} \neq 0$$

Where SVD = service delivery; MCM = management commitment to OSH, OSP is OSH policy implementation, and MCM\_OSP is the interaction term. The results of the analysis are summarized in Table 4.

**Table 4**

*Regression of Service Delivery on Management Commitment to OSH in Level 4 Public Hospitals in Kisii County Moderated by OSH Policy Implementation*

Model	Variable	B	R	R <sup>2</sup>	R <sup>2</sup> <sub>adj.</sub>	R <sup>2</sup> <sub>chg.</sub>	Std.ε	T	Sig.	F	TOL	VIF
1	Constant	.000					.238	.000	1.000			
	MCM	.243					.264	.920	.920		.874	1.145
	OSP	.383					.264	1.451	.172		.874	1.145
	Summary		.521	.271	.150	.271	.922		.150	2.232		
2	Constant	-.115					.240	-.479	.641			
	MCM	.599					.260	2.307	.022		.860	1.162
	OSP	.590					.254	2.326	.021		.817	1.223
	INT	.581					.235	2.475	.017		.934	1.070
	Summary		.626	.391	.226	.120			.012	13.593		

Note. MCM = management commitment to OSH, OSP = OSH policy implementation, INT = MCM\*OSP.

Table 4 presents the regression analysis of service delivery against management commitment in Level 4 public hospitals in Kisii County, with the moderating role of OSH (Occupational Safety and Health) policy implementation. The findings reveal that OSH policy implementation significantly moderates the relationship between management commitment and service delivery, as indicated by the regression results:  $F(3, 11) = 13.593, p = .012; t(13) = 2.475, p = .017$ . Additionally, a significant statistical relationship exists between management commitment and service delivery in these hospitals,  $t(13) = 2.307, p = .022$ . Management commitment emerges as a key predictor of service delivery, and this effect is influenced by the degree to which OSH policy is implemented. In other words, the influence of management commitment on service delivery is contingent upon how effectively OSH policy is put into practice (implemented).

#### 4.2 Discussion

The research revealed that management commitment significantly predicts service delivery. Specifically, investments in OSH, safety audits, availability of safety equipment, and conducting safety meetings were all positively associated with service delivery in level 4 public hospitals in the county. Despite this, the study determined that overall management commitment remains below average, scoring 41.82%, with Ibeno recording the highest score at 43.83% and Marani the lowest at 38.76%. This low level of commitment indicates a lack of shared perspective among management teams regarding safety in their routine decision-making. As noted by Vassie and Lucas, (2001), this may point to minimal direct involvement by top-level management in key OSH-related areas such as safety, quality, environmental concerns, security, and organizational programs. It confirms the fact that workers have low perceptions of the degree to which their managers value and support safe working and their dedication to workers' safety.

Low management commitment points to a negative workplace culture and which makes workers more unlikely to follow safety procedures and raise safety issues. It indicates that hospitals in Kisii County are deficient in six key areas: there inadequate development and support of a clear vision, strategy, and plan (VSP), inadequate support and

participating in safety initiatives and financing safer processes (Alowo et al., 2022). There is also inadequate coaching, giving feedback, rewarding success and recognizing effort in the hospitals in Kisii County (Linda et al., 2020). It can be deduced from this finding that, as Riak and Bill (2022) indicated that leaders of hospitals in Kisii County prefer to hold themselves to less of a standard than what is expected from the employees that follow them.

There is no doubt that safety climate represents either individual or shared perceptions regarding safety procedures, practices, and behavioural norms around safety. This finding on the association between management commitment to OSH and service delivery is in agreement with findings of other studies such as those by Getanda (2022), Onwudiwe et al. (2018), Eke-Bethel and Tamunomiebi (2019), Nee and Remendran (2021), Linda et al. (2020), Mugisha and Rulinda (2025), Nzuve and Ndolo (2020) and Muah et al. (2021). Although the aforementioned studies were conducted in different contexts with variations in study methodologies, they all reported significant positive association between management commitment, or an element of it, with service delivery or job performance. The resonance in the finding between the present study and these other past studies is that in both cases, as Oirere (2019) put it, all members of the management team share a unified way of thinking about safety and incorporate that way of thinking into their daily decisions. And as Vassie and Lucas, (2001) also put it, top-level management is actively involved in all key and critical areas of the organization, including safety, quality, environmental issues, security, and major programmes. In all cases, the management builds a positive workplace culture and that makes workers more likely to follow safety procedures and raise safety issues. But the difference lies in the extent to which these are done. Although other studies have shown higher levels of management commitment, hospitals in Kisii County report a management commitment level of just 41.82%, contributing only 7.7% to the variation in service delivery within these hospitals.

## V. CONCLUSION & RECOMMENDATION

### 5.1 Conclusion

Management commitment was measured from investment in OSH, safety audits, provision of safety facilities and holding safety meetings. The implementation of the OSH policy significantly influences the relationship between the predictor variable and service delivery in the hospitals studied, accounting for a 12.0% change in variance ( $R^2$  change = 0.120,  $p = 0.012$ ). Therefore, OSH policy implementation moderates the influence of investment in OSH, safety audits, provision of safety facilities and holding safety meetings on service delivery in the healthcare facilities. Provision of safety facilities in level 4 hospitals integrates providing ergonomic equipment, safe sharps disposal equipment, and proper ventilation systems. This could reduce musculoskeletal disorders, and minimize exposure to infectious agents and hazardous substances in these facilities. The net effect could be reduction in staff injuries or diseases; and a safer working environment that is a prerequisite to quality service delivery. Where PPEs and safety facilities are not provided by the management, the cost may be borne by patients. This could compromise the affordability of services that are delivered. The study found that management commitment significantly influences service delivery in level 4 hospitals studied, and that this relationship is significantly dependent on the extent of OSH policy implementation. Additionally, it found that the management commitment score in these healthcare facilities is relatively low, at 41.82%. This suggests that although OSH policy implementation moderates the relationship, the overall positive impact of management commitment on service delivery is weakened by its low level.

### 5.2 Recommendations

This study recommends that the management of level 4 healthcare facilities, the relevant Government Ministry and agencies to increase investment in OSH. The parties should also improve the provision of safety facilities to enhance HCWs well-being and safety. 74.1% of the respondents reported that management allocates insufficient resources to support OSH practices. Provision of safety facilities should incorporate ergonomic equipment, safe sharps disposal systems, PPEs and proper ventilation systems. Additionally, the researchers recommend that the management of the facilities should increase the frequency and intensity of safety audits, and ensure that safety meetings incorporate the views of the lower cadre staff.

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