Influence of Risk Management Moderated by Safety Policy Implementation on Service Delivery in Level 4 Public Health Facilities in Kisii County, Kenya

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ABSTRACT

Managing risks inherent in the health sector contributes to the overall improvement in working conditions. It protects healthcare workers against emerging or well-established hazards, guaranteeing their safety and health. This will ultimately foster a safe and healthy work environment that can be assumed to expedite the delivery of clinical services to patients. However, the delivery of health services is still wanting in Kisii County, Kenya. Healthcare workers face a plethora of hazards at the workplace that lead to occupational injuries, illnesses, absenteeism, and reduced ability to work. The Ministry of Health acknowledges that healthcare facilities in Kenya are potentially hazardous. The purpose of the study was to determine the influence of risk management on service delivery moderated by safety policy implementation in level 4 public health facilities in Kisii County. Guided by the Social Exchange theory, it adopted a cross-sectional survey research design. It targeted 521 healthcare workers providing clinical services in level 4 public health facilities located in Kisii County; and patients seeking medical services in these facilities. Proportionate stratified random sampling was used to select a sample of 227 healthcare workers while a sample of 300 patients were selected using convenience sampling. Primary data was collected using semi-structured questionnaires and interviews. Quantitative data was analyzed using descriptive statistics, correlation and simple hierarchical regression. Qualitative data was analyzed by thematic analysis and integrated with quantitative data in the main report. The results revealed that risk management does not have a significant influence on service delivery in level 4 public hospitals in Kisii County, t(13) = .012, p = 0.991. They also established that risk management has no significant influence on service delivery moderated by occupational safety and health policy implementation, F(3, 13) = 1.137, p = .377; t(13) = .497, p = .646). The study concluded that there is no association between risk management and service delivery in level 4 hospitals in Kisii County, and safety policy implementation has no interaction effect on this relationship. The study recommends that hospital management acquire modern and easy to use PPEs and leadership adopt participatory leadership styles to ensure sufficient compliance with safety regulation required for staff and patients.

Keywords: Healthcare Workers' Safety, Occupational Health, Risk Management, Safety Policy Implementation, Service Delivery

I. INTRODUCTION

Healthcare workers constitute a critical foundational element in the delivery of services although they are exposed to occupational risks at their workplaces. Proper management of healthcare risks contributes to the overall improvement in working conditions (Alli, 2008) which facilitates service delivery in healthcare facilities. Thus, healthcare workers' occupational safety and health is closely linked to their service delivery (Adepoju & Esan, 2023). Risk management refers to processes used to assess, recognize, and lower the risk of harm to patients, hospital personnel, and third parties and the risk of losses to the organization (Abor & Abor, 2021). It involves the tools, procedures, and practices that are utilized to identify, assess, avoid, keep track of, control and manage healthcare risks. Risk management aims to protect patients, hospital workers, and guests from unwanted injury (Abor & Abor, 2021; Gbadago et al., 2017). Service delivery refers to the systematic arrangement of activities by service giving institutions with the aim of fulfilling the needs and expectations of service users (Srinivasan & Saravanan, 2019). In health facilities, service delivery entails provision of medical care to patients by healthcare workers (Sepkowitz & Leon, 2020) ensuring public health needs are met through provision of clinical care (Jahantigh, 2019).

Management of healthcare risks became a labour issue in the wake of industrial revolution in Europe when hazards of all disease-causative agents encountered in 50 occupations were defined in 1700. In the United States, the Occupational Safety and Health (OSH) Act of 1970 created the OSH Administration responsible for developing and enforcing workplace safety and health regulations (Alli, 2008). The United Kingdom, Canada, Norway and Sweden have implemented universal health coverage and nationalized delivery of health services, initiatives that have supported





service delivery (Vassie & Lucas, 2019). Developed countries have good healthcare systems and service delivery due to large financial allocation to the health sector (World Health Organization, [WHO] 2020). The issue of risk management within the Italian National Healthcare System has assumed increasing importance in the last 10 years due to the increasing incidence of occupational injuries and diseases (Capocchi et al, 2019). In developing countries, healthcare workers face a plethora of biological, chemical, ergonomic, mechanical and psychosocial hazards at work (Okoth-Okelloh & Ouma, 2020) leading to occupational injuries, illnesses, absenteeism and declining service delivery (Alli, 2008).

A comparative study conducted by Boateng and Yaw (2019) in Accra, Ghana found that private hospitals implemented more risk management practices compared to public hospitals, and that this improved their service delivery. Public hospitals did not effectively practice risk management and this negatively affected their service delivery (Boateng & Yaw, 2019). Adepoju and Esan (2023), in their study conducted in Ondo state of Nigeria, revealed a positive and significant association between risk management and workers' safety. In their study, conducted by in Tanzania Breweries Limited, Nkuba and Mtebe (2023) found that there is a significant association between risk management and employee performance.

In Kenya, healthcare facilities are potentially hazardous exposing healthcare workers to several risks. Public health facilities are at a high occupational safety risk exposing healthcare workers to innumerable occupational hazards (Ministry of Health, 2020). The WHO International Council of Nurses report indicated that Kenya has relatively higher incidents of needle-stick injuries and other related exposures to hazards (Wilburn & Eijkemans, 2004). The Ministry of Health ranked KEPH level 4 health facilities highest in risk and statutory occupational safety and health (OSH) non-compliance (MoH, 2020). The statistics vary across regions in Kenya, with Kisii County being among the poorest. While such records exist, the influence of OSH practices on service delivery in the healthcare facilities had not been determined, yet OSH practices and service delivery have been consistently rated below average.

1.1 Statement of the Problem

Healthcare services promote, maintain, restore, and improve the health of people in a nation. Medical care is a labour-intensive industry and service delivery in public health facilities is contingent upon the performance of healthcare workers. Therefore, protection of healthcare workers from injury and disease arising from work is essential. A safe and healthy work environment may enhance service delivery. Ideally, healthcare workers' occupational safety and health should be guaranteed so that they deliver health services to patients. Nevertheless, occupational injuries and diseases among Kenya's healthcare workers still abound. According to the Ministry of Health assessment report, occupational hazards are still prevalent in healthcare facilities (MoH, 2020). Likewise, Ogolla (2022) studied factors influencing the implementation of clinical risk management programs by nurses in Mbagathi Hospital in Nairobi, using an in-depth qualitative research design with a sample of 20 nurses. Ogolla (2022) found that the leadership of the hospital provided limited support and governance needed to successfully implement clinical risk management. However, while Ogolla (2022) studied risk management and while he found that risk management was poor, Ogolla (2022) did not relate risk management to service delivery.

The emergence of highly infectious diseases such as Covid-19 and SARS has increased occupational risks. In addition, healthcare workers' exposure to a wide range of occupational hazards on daily basis aggravates the problem. They contract occupational injuries and diseases that encumber service delivery. This leads to increased absenteeism, reduced ability to work and ill-health among healthcare workers. This situation may have consequences on service delivery by healthcare workers. Therefore, this study endeavours to determine the influence of occupational safety and health practices on service delivery in level 4 public health facilities located in Kisii County.

1.2 Research Objectives

- i. To determine the influence of risk management on service delivery in level 4 public hospitals in Kisii County.
- ii. To determine the moderating effect on the association between risk management and service delivery in level 4 public hospitals in Kisii County.

1.3 Research Hypotheses

The study was guided by the following five specific research hypotheses:

Ho1: Risk management has a significant influence on service delivery in level 4 public hospitals in Kisii County.

Ho₂: OSH policy implementation has a significant moderating effect on the influence of risk management on service delivery in level 4 public hospitals in Kisii County.



II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1. Social Exchange Theory

The theoretical basis for this study was derived from the Social Exchange Theory advanced by Homan in 1958 and further advanced by Emerson (1976) and Molm (1987). The theory postulates that human relationships are formed by the use of subjective cost-benefit analyses and comparison of alternatives (Homans, 1961). The basis of the Social Exchange theory is that resources are exchanged during interactions and actors in interactions with one another are influenced by success, stimulus and deprivation-satiation (Emerson, 1976). Individuals repeat actions that are rewarded and respond to a particular stimulus that resulted in a reward (Homan, 1961). As put forward by the social exchange theory, behaviour is a function of payoffs which may be tangible or psychological (Molm, 1987).

As applied to this study, the social exchange theory holds that service delivery is a function of various rewards and inducements including safe and healthy workplaces. Managing risks (hazards) that leads to safe workplaces entails resource utilization that is associated with resultant benefits. It may engender positive feelings among employees and lead to improved service delivery. This theory is centred on human relationships, interactions and the resultant payoffs. The theory implies that service delivery (behaviour) is a function of payoffs. Risk management is seen by healthcare workers as benefits with costs. Moreover, it is a theoretical explanation for organizational citizenship behaviour. It presents a model of clear leadership and relational building between hospital management and healthcare workers

2.2 Empirical Review

There are significant amount of studies on risk management, though not necessarily with respect to service delivery in healthcare facilities. Boateng and Yaw (2019) studied the Influence of risk management practices on service delivery in health care delivery in private and public hospitals in Accra, Ghana. They found that private hospitals implemented more risk management practices compared to public hospitals, and that this improved their service delivery. Public hospitals did not effectively practice risk management and this negatively affected their service delivery. Boateng and Yaw (2019) concluded that risk management affects service delivery in healthcare facilities. Boateng and Yaw (2019) conducted a comparative study while this study was carried out in level 4 public hospitals.

The Ministry of Health of Kenya and IntraHealth International conducted a baseline OSH risk analysis assessment on implementation of OSH policy and compliance in the health sector in 2020, in 97 healthcare facilities to evaluate the standards of OSH implementation (MoH, 2020). The study found that health facilities were at high OSH risk and that non-compliance status stand at near severe, Occupational safety and health risks at Ministry of Health facilities KEPH level 4 were serious enough to warrant urgent changes in day to day operations. However while the study concluded that the risk management was poor, it did not relate the risk management to service delivery.

Abubakar (2019) investigated the influence of occupational hazards on job performance and service quality among housekeeping employees in hotels in Kaduna metropolis, Nigeria, using a cross-sectional survey design on a purposive sample of 217 employees comprising guestroom attendants, laundry staff, public area cleaners, supervisors and executive head housekeepers. Abubakar (2019) found a positive correlation between hazard preventive measures and employees' job performance. A hazard preventive measure is synonymous to risk management. Therefore, it is in order to conclude that risk management is associated with service delivery. However, Abubakar (2019) did not study health facilities but conducted the study in a hospitality industry.

Innime and Chika (2022) on the other hand, studied occupational hazards of health care workers in Ikwerre local government area of rivers state, Nigeria. Using a cross sectional descriptive survey and a sample of 263 health care workers, Innime and Chika (2022) found a high level of knowledge about occupational hazards among healthcare workers. They found that length of service, age, gender and educational qualifications had no significant relationship with exposure to occupational hazards in health facilities in Ikwerre. The variables in their study differs from those in the current study that endeavors to determine the influence of risk management on service delivery. However, Innime and Chika (2022), just like the MoH (2020), did not relate these indicators of OSH and service delivery in health facilities.

Ogolla (2022) studied factors influencing the implementation of clinical risk management programs by nurses in Mbagathi Hospital in Nairobi, using an in-depth qualitative research design with a sample of 20 nurses. Ogolla (2022) found that the leadership of the hospital provided limited support and governance needed to successfully implement clinical risk management. However, while Ogolla (2022) studied risk management and while he found that risk management was poor, Ogolla (2022) did not relate risk management to service delivery.

Risk management, as indicated by authors cited above, is positively related to service delivery. Boateng and Yaw (2019), and Abubakar (2019) clearly bring out the relationship between risk management practices and service delivery in health care delivery in hospitals. Abubakar (2019) found that occupational hazards and job performance and service quality are related while Boateng and Yaw (2019) found that risk management practices and service delivery in health care delivery in private and public are related. The MoH (2020) only provided a baseline OSH risk analysis



assessment on implementation of OSH policy and compliance in the health sector; while Ogolla (2022) provided the factors that influence the implementation of clinical risk management programs in hospitals. While the study do not focus on level 4 per se, and while they were not all done in Kenya, or in Kisii county as such, they nonetheless bring out a connection between risk management and service delivery and build strong case for the hypothesis between risk management and service delivery.

Nkuba and Mtebe (2023) conducted a study on the impact of OSH practices on employee performance. The study focused on three indicators of the independent variable - health and safety training, working conditions, safety procedures and risk management - and measured their influence on employee performance. The study used a quantitative approach with a descriptive study design. It was conducted in Tanzania Breweries Limited (TBL) in Mwanza. The employees of the company constituted the study population. Simple random sampling method was used to select the sample. Quantitative data was collected using questionnaires. It was analysed using descriptive statistics, correlation analysis and multiple regression analysis. The results showed that there was a significant association between the independent variables and the dependent variable. That is, safety training, working conditions, safety procedures and risk management had a positive and significant relationship with employee performance.

Khokhar et al. (2021) conducted a study to ascertain the role of OSH practices in the performance of small and medium enterprises. Multi stage cluster sampling was used to select the study sample. Data was business persons of small and medium enterprises (SMEs) located in Karachi and Sindh, Pakistan. Descriptive statistics (mean and standard deviation) and inferential statistic techniques (correlation and simple regression) were used to analyze data. The study findings reveal that OSH practices have a significant relationship with the performance of SMEs.

Otieno (2022) conducted a study on clinical waste management factors associated with healthcare acquired infections among HealthCare Workers in Kisumu County, Kenya. This study adopted a descriptive study design, in which 278 healthcare workers were selected to be participants using stratified random sampling. Quantitative data was collected using self-administered questionnaire while qualitative data was collected using key informant interviews. Logistic regression analysis was used to determine the association between clinical waste management factors and healthcare acquired infections among healthcare workers. The findings reveal that there was inadequate knowledge on categories of clinical wastes that are generated. There is also inadequate knowledge on infections associated with clinical waste management generation. Occasional failure to use PPEs among healthcare workers was reported by 50% of the respondents. Waste segregation bins were suitably located and clinical waste management committee was not constituted in the facilities. Failure to strictly adhere to OSH practices increased the likelihood of healthcare workers acquiring infections by almost half. The findings reveal that clinical waste management factors were significantly associated with healthcare acquired infections among healthcare workers in Kisumu County.

2.2.2 OSH Policy Implementation and Service Delivery

Nderitu et al. (2019) carried out a study to establish the influence of management commitment on OSH policy implementation in Water and Sanitation Companies in Nyeri County. The target population consisted of 474 employees in all water & sanitation companies in Nyeri County. A sample of 243 respondents was drawn using random sampling technique. The study utilized both descriptive and inferential statistics to analyze quantitative data such as frequencies, percentages, mean, standard deviation and multiple regression was used to determine relationship between variables. The study findings revealed that there was a statistically significant positive relationship between management commitment and OSH policy implementation.

The study by Nderitu et al. (2019) was conducted in water and sanitation companies in Nyeri County while this study was conducted in level 4 healthcare facilities located in Kisii County. Thus, the findings of a study in water and sanitation companies may not apply to the health sector. Inferential analysis in a study by Nderitu et al. (2019) utilized multiple regression analysis to determine direct association between the independent variables and the dependent variable. However, in this study hierarchical regression was used to determine both the direct association between the predictor variable and the response variable; as well as the moderating effect of the moderator on the association between OSH practices and service delivery.

Okolieuwa et al. (2023), in a study, examined the impact of OSH policy implementation on workers' performance in the Nigerian National Petroleum Corporation (NNPC) Enugu Depot. The objective of this research was to explore how the implementation of health and safety policies influences the overall performance and well-being of employees in the organization. The study adopted a survey research design. Data was collected using questionnaires and interviews. It was analyzed using descriptive statistics and inferential statistics. The findings revealed that implementation of robust health and safety policies has a positive and significant association with workers' performance.

Otieno et al. (2019) conducted a study on the influence of occupational accidents moderated by occupational health and safety policy regulations on performance of firms in Kenya. The study adopted explanatory research design. The target population was 2,107 comprising of 102 Human Resource managers and 2005 employees in firms registered by the County Government of Busia. Stratified proportionate sampling of firms in retail, agricultural, manufacturing, construction and transport sectors was done. Respondents in the 28 firms were selected by simple random sampling



while 81 human resource managers were selected using purposive sampling. The sample size of the study was 414 respondents. Data was analyzed by descriptive statistics and partial least squares structural equation modelling. The findings reveal that health and safety policy regulation has a moderating effect on the association between occupational accidents and the performance of firms. In addition, they reveal occupational accidents have a significant and negative influence on the firm's performance.

In a study by Okolieuwa et al. (2023), safety policy implementation was the independent variable and workers' performance was the dependent variable. They studied safety policy implementation and its influence on workers' performance in a petroleum corporation located in Enugu, Nigeria. This study was conducted in the health sector; OSH policy implementation being the moderator variable. Although the study by Otieno et al. (2019) and this study focus on the moderating effect of OSH policy implementation on the association between the independent variable and the dependent variable, their predictor variables are different. In a study by Otieno et al. (2019), occupational accidents is the independent variable, while in this study risk management is the predictor variable. Otieno et al. (2019), in their study, targeted human resource managers and employees of firms registered bu Busia County Government. But this study targeted healthcare workers providing clinical services in level 4 hospitals located in Kisii County. Inferential data analysis was done using partial least squares structural equation modelling in a study by Otieno et al. (2019) while in this study using hierarchical simple and multiple regression analyses.

III. METHODOLOGY

The research philosophy of the study was rooted in both positivism and interpretivism schools of thought. This is because it was both quantitative and qualitative in nature. The research was subjective with the researcher as part of the social reality of risk management and service delivery. Objective analysis of data was also done to yield generalizations and conclusions.

The significance of the association between risk management and service delivery in level 4 public hospitals, and the moderating effect of OSH policy implementation on the relationship were determined through simple linear hierarchical regression. A simple linear hierarchical regression technique was used to predict service delivery from risk management moderated by OSH policy implementation based on the general model:

 $Y^I = b_0 + b_1 X + b_2 X * MD + \ \epsilon \dots (1); \label{eq:YI}$ Where:

 Y^{I} was the predicted dependent variable (service delivery), b_{0} the regression constant, b_{1} the moderated regression coefficient and X, the independent variable (risk management), and X*MD is the interaction (moderating) effect.

This study adopted a cross-sectional survey research design in order to provide a quantitative description of the relationship between risk management and service delivery moderated by OSH policy implementation in level 4 public hospitals in Kisii County. The target population comprised 521 healthcare workers delivering clinical services, and patients seeking services in these facilities.

The total sample size, determined according to Yamane (1967) formula of sample size determination with a 5% margin of error with 95% degree of confidence, consisted of 527 respondents. This included 227 healthcare workers and 300 patients in 15 level 4 health facilities in Kisii County. Key informants were selected by purposive sampling while healthcare workers were selected using proportionate stratified random sampling.

Reliability is the stability of a measuring instrument used and its consistency over time: the ability of a measure to give similar results when applied at different times (Oluwatayo, 2020). Reliability was determined by test-retest method and Cronbach's alpha. Content validity was measured through expert judgement technique using a panel of two experts. A Content validity index of 0.820 was reported indicating that at least 8 items out of any 10 items in the instruments, measured what they were intended to measure. Construct validity refers to how well the researcher transforms a concept, that is a construct into a functioning and operating reality, the operationalization (Hamed, 2020). To ensure construct validity in this study, the various measures and variables were derived from theory and prior empirical studies.

Primary quantitative and qualitative data was collected on risk management, occupational safety and health policy implementation and service delivery. Qualitative data was collected from of the five key persons from each level 4 public hospital. Quantitative data was collected from the rest of staff who were not heads of units.

The researcher used questionnaire and interview methods as the main methods of data collection. Semistructured questionnaires were administered on healthcare workers who were not unit heads. Key informants were interviewed to collect data from the unit heads.

Qualitative data was analyzed by thematic analysis and integrated with quantitative data in the main report. Quantitative data was analysed using descriptive and inferential statistics. Descriptive statistics comprised percentages to describe a series of observations in the status of risk management. The moderating effect of OSH policy



implementation on the influence of risk management on service delivery was analysed using simple hierarchical linear regression. A hierarchical simple linear regression technique predicted service delivery from each independent variable (risk management) based on the general model:

 $SD^{I} = b_0 + b_1 RMM + \tilde{b}_2 OSP + b_3 RMM * OSP + \varepsilon \dots (2)$

Where:

 SD^{I} is the predicted service delivery, b_{0} is the hierarchical regression constant; b_{1} is the regression coefficient of risk management, b_{2} is the hierarchical coefficient of the moderator variable; and RMM*OSP is the interaction term.

F statistic was used to measure the significance of the overall hierarchical regression model. The t - statistic was used determine the significance of each regression coefficient. An element of risk management or safety policy implementation was significant if the corresponding t – value was significant, p < .05. R^2_{chg} – was used to measure the moderating effect of OSH policy implementation on the relationship between the independent variable and dependent variable.

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Descriptive Statistics

Risk management was measured from administrative controls, use of PPEs, safety compliance and appropriate waste disposal. Respondents were asked to react to several statements on these variables and the responses were used to measure the status of risk management and service delivery and to assess the variance in service delivery in comparison with risk management.

Table 1

Administrative	Controls	Use of PPFs	Safety	Compliance	and Waste	Disnosal
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Item	Very Poor	Poor	Fair	Good	Very Good	Total	Mean	Std. dev.
Administrative	re 1 (0.5%)		128 (60.4%)	54 (25.5%)	8 (3.8%)	212	3.222	0.690
controls								
Use of PPEs	0 (0.0%)	0 (0.0%)	20 (9.4%)	174 (82.1%)	18 (8.5%)	212	3.999	0.424
Safety compliance	0 (0.0%)	0 (0.0%)	142 (67.0%)	61 (28.8%)	9 (4.2%)	212	3.372	0.565
Waste disposal	0 (0.0%)	0 (0.0%)	6 (2.8%)	181 (85.4%)	25 (11.8%)	212	4.089	0.372
Average	0 (0.13%)	5 (2.4%)	74 (34.9%)	118 (55.5%)	15 (7.1%)	212	3.670	0.512

The best rated OSH risk management aspect is waste disposal (85.4%) followed by use of PPEs (82.1%). Waste disposal also has the highest mean score (M = 4.089, SD = 0.372) with administrative controls being the least rated, M = 3.222, SD = 0.690. Generally, a majority (55.5%) of the staff rated all the four elements of OSH risk management at good (M = 3.670, SD = 0.512). Hence, public hospitals in Kisii County generally have good administrative controls, use of PPEs, safety compliance and waste disposal.

Table 2

Status of Occupational Safety Policy Implementation

Item	Strongly	Disagree	Neutral	Agree	Strongly	Total	Mean	Std. dev.
	Disagree				Agree			
Existence of OSH	0 (0.0%)	3 (1.4%)	45(21.2%)	152 (71.7%)	12 (5.7%)	212	3.816	0.541
Policy								
OSH officer	3 (1.4%)	121 (57.1%)	70 (33.0%)	3 (1.4%)	15 (7.1%)	212	3.429	0.708
Ensures policy adherence								
Several activities are done	8 (3.8%)	14 (6.6%)	57 (26.9%)	129 (60.8%)	4 (1.9%)	212	3.165	0.732
related to policy								
There is OSH policy	4 (1.7%)	98 (46.3%)	93 (44.5%)	7 (3.1%)	10 (4.4%)	212	3.470	0.660
evaluation and								
implementation								

It is noteworthy that healthcare facilities have formulated OSH policies as indicated by 77.4% of the respondents (agreed and strongly agreed). Respondents were asked to indicate whether the hospital has OSH officers who ensure compliance to safety standards. A significant majority (71.7%) of the staff in level 4 public hospital in Kisii County indicated that there are officers whose role is to ensure occupational safety and health. In the overall rating, a large majority (60.8%) have reported that several activities that are related to OSH policy are executed in the facilities.



However, it is noteworthy that OSH policy evaluation and monitoring has been ignored since 46.3% reported that it is not undertaken. A significant percentage of the staff (44.5%) declined to comment about OSH policy monitoring and evaluation.

4.1.2 Inferential Analysis

The objective of this study was to investigate the moderating effect of OSH policy implementation on the influence of risk management on service delivery in level 4 public hospitals in Kisii County. The data was used to assess the variance in service delivery due to risk management moderated by OSH policy implementation. In the study, the average risk management was rated at 52.22% and the average service delivery at 57.00%.

Service delivery was regressed on risk management and OSH policy implementation to determine whether OSH policy implementation has a significant moderating effect on the association between the independent variable and the dependent variable. The study tested the null hypothesis that OSH policy implementation does not have a significant moderating effect on the influence of risk management on service delivery in level 4 public hospitals in Kisii County; against the research hypothesis. Statistically, the study tested the hypothesis that;

OSH policy implementation does not have a significant moderating effect on regression of service delivery on risk management in level 4 public hospitals in Kisii County.

 H_{o1} : R_{SVD} , $R_{MM*OSP*RMM-OSP} = 0$

 $H_{a1}: R_{SVD"RMM*OSP*RMM-OSP} \neq 0$

Where:

SVD = service delivery; RMM = risk management, and OSP is OSH policy implementation, and RMM-OSP is the interaction term.

The results of the analysis are summarized in Table 3.

Table 3

Results of Regression of Service Delivery on Risk Management in Level 4 Public Hospitals in Kisii County Moderated by Policy Implementation

Model	Variable	B	R	\mathbf{R}^2	R ² adj.	R ² chng.	Std.8	Т	Sig.	F	TOL	VIF
1	Constant	57.001					1.941	29.364	.000			
	RMM	038					2.017	019	.884		.993	.1.007
	OSP	.472					2.017	0.234	.090		.993	1.007
	Summary		.470	.221	.091	.221	7.518		.223	1.704		
2	Constant	57.008					2.012	28.388	.000			
	RMM	027					2.197	.012	.991		.895	1.118
	OSP	3.580					2.107	1.699	.117		.972	1.029
	INT	894					1.800	497	646		.890	1.124
	Summary		.486	.237	.028	.015	7.774		.377	1.137		

Note. RMM = risk management, OSP is OSH policy implementation, INT = RMM* OSP

Table 3 displays the summary of hierarchical regression of service delivery on risk management in level 4 public hospitals in Kisii County moderated by OSH policy implementation. The results indicate that there is no significant regression of service delivery on risk management moderated by OSH policy implementation in level 4 public hospitals in Kisii County, F(3, 13) = 1.137, p = .377; t(13) = .497, p = .646. OSH policy implementation has no significant moderating effect on the influence of risk management on service delivery in level 4 public hospitals in Kisii County, t (13) = .012, p = 0.991. Therefore administrative controls, use of PPEs, safety compliance and appropriate waste disposal does not have significant influence on service delivery in level 4 public hospitals in Kisii County whether alone or when moderated by OSH policy implementation.

The finding that risk management does not have a significant influence on service delivery in level 4 public hospitals in Kisii County indicates that administrative controls, use of PPEs, safety compliance and appropriate waste disposal does not have significant influence on service delivery in level 4 public hospitals in Kisii County.

4.1.3 Findings from Interviews

The findings in the preceding section supports the views advanced by the superintendents during qualitative data analysis. A majority (64.3%) of the superintendents interviewed indicated that there are adequate administrative controls and proper use of PPEs. They also argued that there are adequate safety compliance and appropriate waste disposal in most of the sectors of the hospitals. One superintendent said,



"We have subcontracted waste disposal to a competent company that we identified through a rigorous process. Waste management is not one of our problems at all".

One other superintendent put it,

"We care about the safety of all staff and basic PPEs are not only available, but using them correctly is also mandatory for all staff. This we have ensured time and again".

This same view was expressed using different words across most of the superintendents interviewed.

The position taken by the superintendents contrasted sharply with the position taken by the rest of respondents and especially, nurses and the laboratory staff, or lower cadre staff. A majority (82.3%) of the other respondents felt that risk is not properly managed and that risk management in most departments of the hospitals is poor. According to the lower cadre staff, there are weak administrative controls, poor use of PPEs, and appropriate waste disposal. One staff told us,

"The most basic PPE equipment are lacking, including basic things such as hand gloves. How do you work with confidence in such an environment?

This position was supported by another respondent who noted that,

"There are many cases of healthcare workers contracting contagious diseases due to absence of PPEs. This was evident during the Covid-19 period. We have at least one healthcare worker being treated every month for contracting diseases emanating from handling patients".

Another respondent said,

"Sometimes, even waste baskets remain overnight in the room before they are collected. Sometimes we have to call for them to be emptied".

4.2 Discussion

It is not clear why the two cadres of staff present sharply contrasting positions over status of risk management. But whatever their positions, risk management remains a significant element of OSH practice. The fact that risks should be identified, evaluated and analysed and actions taken action to eliminate or control them need not be overstated, especially in a health institution. It was expected that all cadres of staff agree on the risk management issues in the hospitals in Kisii County. Because while the management provides conditions of risk management, the lower cadre staff implements measures to ensure risks are well managed. However, despite the contrasting positions, data available shows that risk management does not significantly influence service delivery in hospitals in Kisii County. This finding supports the position of Boateng and Yaw (2019) who found that private hospitals implemented more risk management practices compared to public hospitals, and that this improved their service delivery. The findings of this study would have been different if private hospitals were included in the present sample. It seems, as Boateng and Yaw (2019) found in Ghana, that public hospitals do not effectively practice risk management. This can negatively affect their service delivery. The position of the lower cadre staff supports the findings by MoH (2020) in a baseline OSH risk analysis assessment on implementation of OSH policy and compliance in the health sector in 2020, which concluded that health facilities were at high OSH risk and that non-compliance status stand at near severe, OSH risks at MOH health facilities KEPH level 4 and 5 were serious enough to warrant urgent changes in day to day operations (MoH, 2020).

The finding that risk management does not influence service delivery implies that services will be delivered at the same status regardless of the status of risk management. This does not agree with the position of Abubakar (2019), and with the findings of Ogolla (2022). Abubakar (2019) found a positive correlation between hazard preventive measures and employees' job performance, though he did not study health facilities. Ogolla (2022) found that the leadership (which is synonymous to administrative controls) of Mbagathi Hospital in Nairobi provided limited support and governance needed to successfully implement clinical risk management. Risk management, as identified by this, is not related to service delivery. While Boateng and Yaw (2019), and Abubakar (2019) clearly bring out the relationship between risk management practices and service delivery in health care delivery in hospitals, this position does not apply to health facilities in Kisii County. The most probable explanation is the fact that the finding of the present study concurs with the MoH (2020) that provided a baseline OSH risk analysis assessment on implementation of OSH policy and compliance in the health sector.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

This section draws the conclusion of the study based on the findings made and related literature reviewed. The overall intention of the study was to determine the moderated effect of OSH policy implementation on the influence of risk management on service delivery in public hospitals in Kisii County. To achieve this aim, the study investigated two specific objectives and tested two fundamental specific hypotheses: the influence of risk management on service delivery; and the moderating effect of OSH policy implementation on the influence of risk management on service delivery. The study found that OSH policy implementation does not have a significant moderating effect on the influence



of risk management on service delivery [F(3, 11) = 1.137, p = .377; t(13) = 1.800, p = .646]. It also established that risk management has no significant influence on service delivery in level 4 public hospitals in Kisii County.

5.2 Recommendations

This study established that risk management does not have a significant influence on service delivery in level 4 public hospitals in Kisii County regardless of the status of OSH policy implementation. Therefore administrative controls, use of PPEs, safety compliance and appropriate waste disposal does not have significant influence on service delivery in level 4 public hospitals in Kisii County. But the average risk management was above average (52.22%). The no-influence outcome could have been due to administrative styles and nature of PPEs in use. The researcher recommends that hospital management acquire modern and easy to use PPEs and leadership adopt participatory leadership styles to ensure sufficient compliance with safety regulation required for staff and patients.

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