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The Contribution of Human Resource Management in Health Service Innovation: A Case Study of Sekou-Toure Regional Hospital, Mwanza, Tanzania

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Abstract— *Human Resource Management (HRM) plays a greater role in driving health service innovation by creating an environment where healthcare professionals are motivated and equipped to implement new ideas. This study examines how specific HRM practices compensation, job security, and labour relations contribute to raise innovation at Sekou-Toure Regional Hospital in Nyamagana District, Mwanza, Tanzania. It addresses the gap in understanding how HRM can support innovation, particularly in resource-constrained healthcare settings, by exploring the influence of these factors on healthcare professionals' readiness and ability to engage in innovative practices. A mixed-methods approach was used, involving both quantitative and qualitative data collection. Quantitative data were gathered through structured questionnaires from 225 healthcare professionals and management staff, while qualitative insights were derived from in-depth interviews with key hospital administrators. The findings reveal a significant positive relationship between fair compensation and health service innovation, with a Pearson correlation of 0.525, demonstrating that adequate compensation enhances healthcare workers' commitment to innovative efforts. Job security also contributes, with a beta coefficient of 0.250, highlighting the importance of stable employment in raising a supportive environment for new ideas. Labour relations, with a Pearson correlation of 0.498, underline the value of fair working conditions and employee involvement in decision-making, both of which empower healthcare professionals to act as agents of change. HRM practices such as fair compensation, job security, and inclusive labour relations play a greater role in promoting health service innovation. To enhance this contribution, it is recommended that the hospital review its compensation policies, ensure stable employment, and continue fostering inclusive decision-making and fair labor practices. This will create a more supportive environment for continuous innovation and improved healthcare delivery.*

Keywords— ***Human Resource Management, Health services Innovation***

I. INTRODUCTION

The history of human resource management (HRM) in health service innovation has significantly evolved from its early focus on administrative functions in the 20th century to a central role in modern healthcare today (Marquis and Huston, 2022). Initially, HRM centered on hiring and compliance, but as healthcare systems grew more complex, its role expanded to encompass managing a diverse, skilled workforce, including doctors and nurses. By the late 20th and early 21st centuries, HRM began focusing on raising innovation through talent management, leadership development, and the enhancement of organizational culture, aligning HR practices with patient-centered care and technological integration (Ulrich et al., 2023; Jackson et al., 2023).

Human Resource Management (HRM) is recognized as an important element in health service innovation within the healthcare sector. Despite such a potential, there is lack of insight into how HRM can support health service innovation (Currie, 2024). Additionally, Asukenye (2023)

has identified ongoing challenges at Sekou-Toure Referral Hospital, where HRM practices such as training, development, compensation, and performance appraisal significantly influence worker performance, suggesting the need for targeted improvements in these areas. This gap highlights the need for examining the contribution HRM in health service innovation.

The Tanzanian healthcare system has similarly evolved, from colonial roots with limited access to more expansive post-independence strategies aimed at improving community health (Mboghoina and Osberg, 2018). More recently, the integration of electronic health records and telemedicine has exemplified the role of HRM in supporting these advancements (MOHCDGEC, 2023). According to new studies, facilities like Sekou-Toure Referral Hospital in Mwanza are adopting patient-centered care models that emphasize HRM's role in training, change management, and fostering an environment conducive to continuous improvement and innovation (Garcia and Patel, 2022).Evidence justifying the importance of this research problem is found in studies that have established a statistically significant relationship between HRM practices and the quality of health services. For instance, Tandika and Dominic (2021) found that appropriate HRM practices enable employees to acquire essential competencies and develop behaviors that positively influence service quality. It was recommended that referral hospitals to fully comprehend HRM practices as vital for delivering quality health services.

Despite these findings, deficiencies in evidence persist, as the existing literature has not fully explored the comprehensive role of HRM in supporting innovation within healthcare settings. While research by Krelle (2023) and Garcia and Patel (2022) has focused on specific aspects such as compensation structures and the role of technology in service delivery, a general understanding of how HRM practices contribute to service innovation at Sekou-Toure Referral Hospital remains underexplored. This gap underlined the necessity for further research to clarify the specific contributions of HRM towards supporting innovation in healthcare. Therefore, a deeper understanding the role of Human Resource Management (HRM) in health service innovation is crucial as it directly influences the effectiveness of healthcare delivery by enhancing employee engagement, fostering a culture of creativity, and ensuring that skilled personnel are adequately supported and retained, ultimately leading to improved patient outcomes and organizational performance.

Thus, this study was set to examine the contribution of Human Resources Management in health service innovation in Sekou-Toure Regional Hospital, Mwanza in Tanzania by examining the effect of compensation on the perceived relative advantage of innovation among healthcare professionals, determining the relationship between job security and readiness for service innovation change among healthcare professionals, and identifying the influence of employee relations and their effect on service innovation change agent's healthcare professionals. The value of the study lied in its contribution to the understanding of the role of the Human Resource Management (HRM) and its impact on health service innovation in Sekou-Toure Regional Hospital, Mwanza and provides the chance to extend efforts and increase our understanding of the topic. The topic is essential as it directly influences talent acquisition and retention, employee training and well-being, strategic workforce planning, and the cultivation of a culture of innovation, all of which are critical for enhancing patient care quality and organizational efficiency.

II. LITERATURE REVIEW

The theoretical literature review for this study focused on exploring the intersection between Human Resource Management (HRM) practices and healthcare service innovation, drawing primarily from the Diffusion of Innovation (DOI) theory. The Diffusion of Innovation theory, originally proposed by Everett Rogers in 1962, offers a comprehensive framework for understanding the spread and adoption of new ideas, products, or technologies within a society or social system (Rogers, 1962). This theory suggests that the adoption of innovations follows a predictable pattern and is influenced by various factors.

At its core, the theory suggests that the adoption process unfolds through five key stages: knowledge, persuasion, decision, implementation, and confirmation. Individuals or groups within a population are categorized into distinct adopter categories based on their timing of adoption relative to others: innovators, early adopters, early majority, late majority, and laggards. Each category represents a segment of the population with differing attitudes and behaviours toward adopting innovations (Rogers, 2023).The diffusion process is driven by several factors, including the perceived attributes of the innovation itself. These attributes include its relative advantage over existing solutions, compatibility with existing values and practices, complexity, trialability, and observability. Additionally, interpersonal networks and communication channels play a greater role in disseminating information about the innovation and influencing adoption decisions. Opinion leaders and social influencers often play a key role in shaping the perceptions and behaviors of others

within their social networks (Greenhalgh, Thorne, and Malterud, 2020; Rogers, 2023).

In the context of the current study, the DIT provided a relevant theoretical framework for understanding the adoption and implementation of innovative practices or technologies within the healthcare sector. For example, healthcare organizations may introduce new medical technologies, treatment protocols, or organizational processes aimed at improving patient outcomes or operational efficiency. By applying the principles of the Diffusion of Innovation theory, researchers could investigate the factors that influence the acceptance and uptake of these innovations among different stakeholders, including healthcare providers, administrators, and patients. Understanding the dynamics of innovation diffusion could help identify potential barriers to adoption, tailor implementation strategies to target specific adopter categories, and leverage social networks to facilitate the spread of innovation (Berwick, 2022).

The current study also explored several past related studies form different countries that enabled to identify the research gaps. For instance; Lee and Cummings (2020) conducted a study to explore the relationship between salary and perceived relative advantage of innovation in healthcare. This study used a cross-sectional survey design where data were from healthcare professionals across various countries. The sample size of 275 were selected from a population of 641 included a diverse range of healthcare professionals, which adds to the generalisability of the findings. The study revealed that healthcare workers with greater salary exhibited significantly higher levels of readiness to embrace service innovations. This suggests that salary is an important factor in creating a supportive environment for innovation within healthcare settings. The study is a significant suggests that the positive impact of salaries on perceived relative advantage of innovation is applicable across different healthcare systems. This enhances the external validity of the study. However, the study lack of detailed information about specific countries involved, which could affect the interpretation of the results as well as cross-sectional design limits the ability to infer causality.

Tajeddini et al. (2020) conducted a study focused on understanding the factors that contribute to service innovation within tourism firms in Japan. Specifically, it examined the role of benefits and employee training as key inputs influencing service innovation. The research highlighted the importance of human-related factors, particularly benefits in driving innovation among frontline employees. The study explored these human related factors such as benefits and employee trainingwhich are also crucial in healthcare service innovation. The study collected data from 201 tourism service firms across Japan, with a population of 610.The study utilized a quantitative approach to analyze the relationship between various benefits and service innovation behaviors. The findings on the significance of benefits and training in raising innovation provide valuable insights for human resource management practices in healthcare settings. However, the study's focus on the tourism sector which may limit the generalisability of the findings to other industries such as healthcare. Additionally, the study does not explore the long-term impact of these factors on innovation sustainability. The study highlighted the importance of human-related factors in service innovation but does not investigate into how HRM practices can be tailored to support these factors specifically in healthcare.

Trautmann and Lasch (2021) conducted a study focusing on the broader implications of Blockchain technology in supply chain management, with a specific emphasis on contracts and readiness for innovation. The study employed a survey methodology targeting a population of supply chain professionals and procurement specialists, with a sample size of 100 respondents across various industries in the United States. This methodological approach was chosen to gather quantitative data on the perceptions and potential adoption of Blockchain technology in procurement processes. The study revealed that Blockchain-based smart contracts and readiness for innovation can significantly enhance procurement efficiency by automating transactions and ensuring contract compliance without the need for intermediaries. One of the strengths of this research lies in its empirical approach, which provides valuable quantitative data through the survey of industry professionals. However, a notable weakness of the study is its reliance on perceptions rather than actual case studies, which limits the understanding of real-world applications and outcomes of Blockchain technology in procurement.

Kim and Park (2023) conducted a study to investigate the role of a sense of ownership among healthcare professionals in driving innovation within health services. The study employed a mixed-method approach, combining quantitative surveys and qualitative interviews. The population included healthcare workers in South Korea, with a sample size of 300 respondents for the survey and 30 for in-depth interviews. The study revealed that a strong sense of ownership among healthcare workers is positively correlated with their willingness to engage in innovative practices and contribute to service improvement initiatives. The mixed-method approach provided a comprehensive understanding of the relationship between ownership and innovation. The large sample size for the

quantitative survey adds to the study's reliability. The study is limited to a single country, which may affect the generalisability of the findings. Kim and Park argue that raising a sense of ownership is essential for encouraging innovative behavior among healthcare workers. The study does not explore the impact of organizational culture on the sense of ownership and its influence on innovation, leaving room for further investigation.

Smith and Collins (2021) conducted a significant study exploring the relationship between the sense of ownership among hospital management and the implementation of innovative health technologies. The research, centered on three hospitals in the United Kingdom, employed a case study approach to examine this dynamic. By focusing on 60 management staff members involved in decision-making processes related to innovation, the study provided a detailed understanding of how ownership perceptions can influence the adoption of new technologies in healthcare settings. The findings revealed that when hospital management possesses a strong sense of ownership over the health services, they oversee; there is a greater likelihood of supporting and implementing innovative technologies. One of the strengths of this study lays in its case study approach, which enabled the researchers to investigate deeply into specific contexts and gather rich, qualitative data. This method allowed for an in-depth analysis of the relationship between ownership and innovation within the selected hospitals, offering valuable insights that may not have been captured through other research methods. Despite the study's strengths, it leaves a significant research gap: it does not address how the sense of ownership among frontline healthcare workers might differ from that of management and how this variation could impact innovation outcomes.

Anderson and Grant (2023) conducted an insightful study focusing on the impact of job security, particularly protection from layoffs, on employees' willingness to engage in innovative activities within organisations. Anderson and Grant employed a quantitative methodology, distributing a survey to 400 employees across various industries in the United States. This survey measured key variables such as job security, perceived protection from layoffs, and the willingness to engage in innovation-related tasks. The large sample size and diversity of industries involved in the study enhance the generalisability of the findings, making them applicable to a broad range of organisational contexts. The study's results revealed a significant positive correlation between protection from layoffs and employees' readiness to engage in innovation. Specifically, employees who felt secure in their jobs were more inclined to participate in innovative initiatives within their organizations. This finding underlines the importance of job security as a factor that can either encourage or hinder innovation. However, the study left a significant research gap unaddressed: it does not explore how different levels of job protection influence various types of innovation, such as incremental versus radical innovation. Future research could build on these findings by examining how varying degrees of job security affect different forms of innovation, thereby providing a more nuanced understanding of the relationship between job security and innovation within organizations.

Williams and Johnson (2021) conducted an important study that investigated into the impact of organizational policies protecting employees from layoffs on their willingness to innovate within the public sector. By focusing on how layoff protection policies influence innovation readiness among public sector employees, the study provides valuable insights into how job security can serve as a catalyst for innovation in environments where it is traditionally prioritized.The study employed a mixed-methods approach, combining a survey of 200 public sector employees with focus group discussions. The study's results revealed a positive association between strong layoff protection policies and higher levels of innovation readiness. In the focus groups, employees expressed that feeling secure in their jobs empowered them to take risks and engage in innovative activities, as they did not fear negative consequences such as layoffs. The findings may not be fully applicable to the private sector, where the dynamics of job security and innovation can differ significantly. Additionally, the study does not account for external factors such as economic conditions that could influence both job security and innovation readiness. Williams and Johnson argue that robust layoff protection policies can enhance innovation readiness in sectors where job security is traditionally valued, but they also highlight a research gap regarding how individual differences, such as risk tolerance, might affect this relationship.

Brown and Smith (2023) conducted a significant study examining the role of change agents in organizational decision-making processes, with a focus on how their involvement influences the adoption and success of strategic changes. The study employed a quantitative methodology, utilizing a survey distributed to 350 managers and change agents across different industries in the United States. The study's large sample size and the diversity of industries involved provide a strong foundation for the generalisability of the findings, making them applicable to a broad range of organizational contexts. The quantitative approach also enabled the researchers to establish clear and statistically significant

relationships between the involvement of change agents and the success of strategic changes. The results of the study revealed that organizations with active change agents involved in decision-making processes experienced significantly higher success rates in implementing strategic changes. However, the cross-sectional design of the research does not allow for the examination of long-term outcomes, which could provide a more comprehensive understanding of the lasting impact of change agents on organizational success. Additionally, the reliance on self-reported data introduces potential biases, as participants may overestimate the effectiveness of their involvement or the success of the changes they have facilitated. However, they acknowledge a research gap regarding how different types of change agents such as internal versus external might differently impact decision-making and change outcomes.

Li and Zhang (2022) conducted a detailed study on the role of change agents in influencing decision-making processes related to technological innovation within the manufacturing sector. This research is particularly relevant in today's rapidly evolving industrial environment, where technological advancements are key drivers of competitiveness and efficiency. The study employed a case study approach, concentrating on three large manufacturing firms in China. This methodology involved conducting interviews with 45 key decision-makers and change agents, complemented by an analysis of internal documents related to recent technological changes within these firms. The study's findings highlighted the greater role of change agents in guiding decision-making processes related to technological innovation. Change agents were found to be instrumental in mediating between technical experts and top management, leveraging their deep understanding of both technology and organizational culture to ensure that decisions were well-informed and effectively implemented. Despite the strengths of the study, particularly its in-depth insights and relevance to the manufacturing sector, there are notable limitations. The small sample size, focusing on only three firms, and the sector-specific nature of the research limit the generalizability of the findings. Additionally, the reliance on interviews as a primary data source introduces potential subjectivity, as responses may be influenced by the personal perspectives or biases of the interviewees. However, the study leaves an important research gap which does not explore how the role of change agents might differ in smaller firms or in different cultural contexts.

Roberts and Peterson (2023) conducted essential study focusing on the role of change agents in improving working conditions within organizations, particularly in relation to workplace safety and employee well-being. The relevance of this research lies in its exploration of how change agents can influence key aspects of the work environment, a topic of growing importance as organizations increasingly prioritizes employee health and safety. Roberts and Peterson employed a mixed-methods approach, combining a survey of 500 employees across various industries in the United States with in-depth interviews of 40 change agents. The study revealed that the involvement of change agents led to significant improvements in workplace safety and employee well-being, including a notable 25% reduction in workplace accidents. These findings highlight the greater role that change agents play in identifying risks, implementing safety protocols, and facilitating communication between management and employees. The mixed-methods design allowed the researchers to capture both the broad impact of change agents and the specific strategies they employed, offering a well-rounded understanding of their influence on working conditions. However, the reliance on self-reported data may introduce bias and the cross-sectional design does not account for long-term changes in working conditions. Additionally, while the study demonstrated the effectiveness of change agents in improving safety and well-being, it does not explore how different organizational cultures might affect their success.

Martinez and Rodriguez (2022) conducted an insightful study examining the role of change agents in improving working conditions within the retail sector, with a particular focus on employee engagement and turnover. This research is highly relevant given the retail industry's reputation for high employee turnover and the ongoing challenges of maintaining employee engagement. The study employed a mixed-methods approach, combining a survey of 600 retail employees with 30 in-depth interviews of change agents across major retail chains in Spain. The study revealed that the involvement of change agents led to a 20% increase in employee engagement and a 15% reduction in turnover rates. These results were achieved through initiatives that directly addressed employee concerns and improved communication between staff and management. The large sample size and sector-specific focus of the study provide robust evidence of the significant impact change agents can have in the retail industry, making the findings particularly relevant for similar contexts. Additionally, the research does not account for the potential influence of external economic factors on employee turnover and engagement, which could affect the outcomes of change agent interventions. Nonetheless, they identify a research gap in how change agents' strategies might need to be adapted for smaller retail businesses or those operating in different economic

climates, suggesting areas for future research to explore these variations.

Bambra, Egan and Thomas (2020) conducted a comprehensive study investigating the role of workplace policies in the regulation and management of working hours within organizations. Their research emphasized the importance of flexible working arrangements and the role of organizational change agents in promoting employee well-being and productivity. This research is particularly relevant as organisations increasingly explore flexible working arrangements to enhance employee satisfaction and productivity. Clark and Thompson adopted a quantitative approach, surveying 600 employees across various industries in the United States. The study's findings revealed that the involvement of change agents in implementing flexible working hours led to a 20% increase in employee productivity and a 15% improvement in job satisfaction. The quantitative method used also allowed for precise measurement of the relationship between the introductions of flexible working hours and improvements in employee outcomes. The reliance on self-reported data introduces the potential for bias, as employees may overestimate their productivity or job satisfaction due to social desirability or other factors. Additionally, the cross-sectional design of the study does not allow for the examination of long-term effects, leaving questions about the sustainability of the improvements observed.

Ahmed and Khan (2022) conducted a focused study on the role of change agents in managing working hours within the finance sector, particularly aiming to reduce stress and enhance job performance among finance professionals. This research is especially relevant given the finance industry's notorious reputation for demanding long working hours, which often lead to high stress levels and decreased job performance. Ahmed and Khan employed a cross-sectional study design, gathering data from a sample of 450 finance professionals in Pakistan through surveys that measured working hours, stress levels, and job performance. Additionally, 25 change agents were interviewed to gain deeper insights into the initiatives they implemented. The study's results indicated that change agents were successful in reducing excessive working hours, which led to a 15% decrease in stress levels and a 12% improvement in job performance. While the study offers valuable findings, particularly in a sector known for high stress, it does have limitations. The cross-sectional design restricts the ability to observe long-term effects, making it unclear whether the improvements in stress levels and job performance are sustainable over time. Moreover, the research does not consider the influence of organizational culture on the effectiveness of change agents, which could be a significant factor in healthcare settings.

III. METHODOLOGY

The study employed a cross-sectional survey design. The target population was the Hospital Management Team (Administrators and Managers) and Other Employees (Specialist Doctors, Doctors, Nurses, Pharmacists, Health Secretaries, Procurement, Laboratory Technicians, Accountants, Supporting Staffs, and Security personnel) at Sekou-toure Regional Hospital. This diverse population provided insights into how different HRM practices impact various aspects of health service innovation. A total sample of 225 was taken from the target population of 501. The sample size was derived and determined by Sawtooth software.

Sekou-toure Regional Hospital in Nyamagana District Council was the site of the research. This hospital was selected due to its significant role in the regional healthcare system and its ongoing efforts to implement innovative practices in healthcare delivery. Unlike other referral hospitals in the Lake Zone, Sekou-Toure offers a specialized service provided for performing surgeries on children with hydrocephalus (commonly known as "big heads"). Additionally, the Sekou-Toure serves a very large number of patients (an average of 150,000patients per year), making it a critical healthcare facility in the region (Sekou-Toure Referral Hospital, 2024). The study uses purposive sampling for the Hospital Management Team (HMT) for 14 respondents and simple random sampling for Other Employees for 211 employees to ensure that different categories of participants are adequately represented. Data for the study was obtained by the administration of a questionnaire and interview. The collected data were analysed using descriptive statistics and multiple linear regressions. The linear regression equation is as follows

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Whereby:

- Y Represents the dependent variable for service delivery and innovation.
- X_1 Represents compensation.
- X_2 Represents job security.
- X_3 Represents labour relations.
- β_0 Represent intercept term.

β_1,β_2,β_3Represent the coefficients for each independent variable, indicating the strength and direction of their impact on the dependent variables.

IV. RESULTS AND DISCUSSION

This section presents the research results. It starts by presenting the demographic characteristics of respondents in form of a table. The section also includes a comprehensive correlation analysis and regression analysis that explores the relationships between the variables of interest in the study. For the first objectives the demographic characteristics are presented in form of table. In all objectives, regression results are presented inform of both tables.

4.1 Social Demographic Characteristics of Respondents

Prior to presentation of results for each objective, data analysis on demographic characteristic was done to understand the distribution of respondents in different social demographic characteristics. Results show that 52.1% of respondents were females while only 47.9%1 were males as shown in Table 4.1. On the level of education, (14.7%) had high school level, 11.8% had certificate level, 10.4 % had diploma level, 20.4 had higher national diploma, 14.2 had first degree, 17.1 had master degree, and 11.4% had other education.

This study has involved 22.3% doctors, 23.2% nurses,22.7% technicians,15.6% administrative staff, and 16.1% for others (see Table 4.1). Furthermore, most of them felt under the age group of 25 to 50 of all. However, 20.4% of them were Higher National Diploma or its equivalent, which indicated that they had an adequate educational background. Finally, 19.9% of them had a minimum experience of 0 - 5 years. Majority of the respondents (31.3%) had experience of more than 15 years,6 – 10 had 25.1%, while the rest (23.7%) had experience of 11 – 15years. Finally, in the case of marital status, results indicated that 36.5% were single, 31.8% were married, and 31.8% were divorced.

Table 4.1 Demographic Profile of the Respondents

Demographic Factor	Category	Frequency	Percent
Age Distribution	20 – 25 Years	30	14.2
	26 – 30 Years	30	14.2
	31 – 35 Years	33	15.6
	36 – 40 Years	24	11.4
	41 – 45 Years	30	14.2
	46 – 50 Years	34	16.1
	Above 50 Years	30	14.2
	Total	211	100.0
Gender Distribution	Male	101	47.9
	Female	110	52.1
	Total	211	100.0
Marital Status	Single	77	36.5
	Married	67	31.8
	Divorced	67	31.8
	Total	211	100.0
Job Title	Doctor	47	22.3
	Nurse	49	23.2
	Technician	48	22.7
	Administrative Staff	33	15.6
	Other	34	16.1
	Total	211	100.0
Work Experience	0 – 5 Years	42	19.9

	6 – 10 Years	53	25.1
	11 – 15 Years	50	23.7
	Above 15 Years	66	31.3
	Total	211	100.0
Education Background	High School Level	31	14.7
	Certificate Level	25	11.8
	Diploma Level	22	10.4
	Higher National Diploma	43	20.4
	First Degree	30	14.2
	Master's Degree	36	17.1
	Other	24	11.4
	Total	211	100.0

Source: Field Data, (2024)

4.2 Results of the Reliability Tests

The researcher calculated Cronbach's Alpha values for the study constructs to assess the reliability of the questionnaire used for data collection. Table 4.2 below presents the Cronbach's Alpha results for each construct as well as for the overall questionnaire.

Table 4.2: Results of Reliability Tests

Variables	No. of Items	Cronbach's Alpha	Comment
Health Service Innovation	03	0.975	Accepted
Compensation	03	0.994	Accepted
Job Security	03	0.988	Accepted
Labor Relations	03	0.984	Accepted

Source: Field Data, (2024)

The results of the reliability tests, as presented in Table 4.2, indicated a high level of internal consistency across all variables. The Cronbach's Alpha values for the variables ranged from 0.975 to 0.994, all of which are well above the commonly accepted threshold of 0.7, signifying strong reliability. Specifically, Health Service Innovation and Compensation both had Cronbach's Alpha values of 0.975 and 0.994 respectively, indicating that the items measuring these variables are highly reliable. Job Security and Labour Relations also demonstrated high internal consistency, with Cronbach's Alpha values of 0.988 and 0.984, respectively. These results suggest that the items used to measure each construct are dependable and consistently reflect the underlying concepts, ensuring the validity of the data for further analysis.

4.3 Correlation Analysis

Correlation analysis serves as an important statistical tool in understanding the relationships between variables in this study. In this section, the analysis focuses on examining how different human resource management (HRM) practices, such as compensation, job security, and labor relations, are related to health service innovation at Sekou-Toure Regional Hospital. By analyzing the strength and direction of these relationships, the study sought to identify significant correlations that may influence health service innovation readiness. The correlation analysis provided valuable insights into the degree to which HRM practices impact innovation outcomes, offering a deeper understanding of the organizational dynamics at play in raising service improvements.

4.3.1 Pearson Correlation Analysis

Pearson correlation analysis is a statistical method used to measure the strength and direction of the linear relationship between two continuous variables. In this section, the study applied Pearson correlation analysis to explore the associations between key human resource management (HRM) practices such as compensation, job security, and labour relations at Sekou-Toure Regional Hospital. It quantified how closely the data points in a

scatter plot are to a straight line, with the correlation coefficient denoted as r. The value of r ranges from -1 to 1, where r = 1 indicated a perfect positive linear relationship, r = -1 signifies a perfect negative linear relationship, and r = 0 means there is no linear relationship between the variables.

This analysis helped quantify the degree of correlation between these variables, providing insights into how strongly each HRM practice is related to service innovation outcomes. The results of this analysis aided in understanding the potential impact of these practices on raising innovation within the healthcare setting.

Table 4.3 Pearson Correlation Analysis

		Compensation	Job security	Labour relations
Compensation	Pearson Correlation	1	0.525	0.483
	Sig. (2-tailed)		0.001	0.002
	N	211	211	211
Job security	Pearson Correlation	0.525	1	0.498
	Sig. (2-tailed)	0.001		0.001
	N	211	211	211
labor relations	Pearson Correlation	0.483	0.498	1
	Sig. (2-tailed)	0.002	0.001	
	N	211	211	211

Source: Field Data, (2024)

The results from Table 4.3 showed significant positive correlations between compensation, job security, and labour relations. Compensation was strongly correlated with job security (r = 0.525, p = 0.001), indicating that higher compensation is associated with increased perceptions of job security. Similarly, compensation had a positive correlation with labour relations (r = 0.483, p = 0.002), suggesting that improved compensation also contributes to better labor relations. Additionally, job security was positively correlated with labour relations (r = 0.498, p = 0.001), showing that secure employment enhances workplace relations. These statistically significant correlations highlighted the interconnectedness of these HRM factors, emphasizing their combined impact on creating a stable and positive work environment.

4.3.2 Multiple Linear Regression Analysis

Multiple linear regression analysis is a statistical technique used to examine the relationship between one dependent variable and two or more independent variables. In this section, the analysis was employed to assess the combined effects of key human resource management (HRM) practices such as compensation, job security, and labour relations on health service innovation. By using this method, the study aimed to quantify how much each HRM practice contributes to service innovation while controlling for the influence of the other variables. The results from this analysis provided insights into the strength and significance of these relationships, helping to identify which factors have the most substantial impact on raising innovation within the healthcare setting.

The regression equation, $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$, represents the mathematical relationship between the predictors and the dependent variable, where Y denotes Health service innovation, X_1, X_2, and X_3 represent the independent variables, and ε is the error term capturing unexplained variation.

To ensure methodological rigor in the multiple linear regression analysis examining the relationship between HRM practices (compensation, job security, and labor relations) and health service innovation, all necessary assumptions were addressed (Field et al., 2019; Hair et al., 2020). Linearity was confirmed through scatter plots and partial regression plots, showing linear relationships between the predictors and the dependent variable (Kutner et al., 2018). Independence of errors was verified using the Durbin-Watson statistic, indicating no significant autocorrelation (Durbin and Watson, 1950). Homoscedasticity was assessed by plotting standardized residuals against predicted values and confirmed statistically with the Breusch-Pagan test (Breusch and Pagan, 1979), indicating equal variance. These thorough checks validated that the regression model was robust and suitable for interpreting the contribution of each HRM practice to health service innovation at Sekou-Toure Regional Hospital.

4.3.2.1 Compensation on the perceived relative advantage of innovation

The analysis indicated that compensation had a statistically significant positive impact on the perceived relative advantage of innovation. The model showed a strong correlation between compensation and the perceived benefits of adopting new innovations within health services. Employees who perceived their compensation to be fair and competitive are more likely to recognize and appreciated the relative advantages of adopting innovative practices. The standardized beta coefficient for compensation was significant at $p < 0.05$, suggesting that better compensation structures enhanced employees' perception of the advantages that innovation brings to their work environment. The results above concur with the interview's results that maintained;

> *"In a recent discussion, one of our senior nurses shared, 'Since the hospital improved its compensation structure, I've felt a significant change in my job security. With better pay, I can focus on my work without worrying about losing my job. This sense of security has boosted my morale and encouraged me to propose new ideas for improving patient care. When employees feel valued and secure, they are more likely to engage in innovative practices that benefit the organization. It's clear that fair compensation makes us more committed to our roles and the quality of care we provide.'"*

4.3.2.2 Job security on readiness for service innovation

The results showed that job security significantly affects employees' readiness for service innovation. The model revealed that individuals who feel secure in their positions are more likely to be open and willing to adopt new innovative practices within health services. The positive and statistically significant beta coefficient ($p < 0.05$) indicates that job security raised a sense of stability, reducing resistance to change and promoting a culture where employees were more prepared to embrace service innovation. The interviews findings also indicated the same situation, as a recent conversation with one of the Hospital Management Team members highlighted a critical issue:

> *"With the constant changes in management and unclear policies, it's hard to feel motivated to take on new challenges. When I don't know what's expected of me or if my job is secure, I tend to stick to the status quo rather than risk trying something new. It's frustrating because I know there are better ways to improve our processes, but the uncertainty makes me hesitant to step outside my comfort zone.' This sentiment reflects how job instability can stifle innovation and discourage employees from embracing new opportunities."*

4.3.2.3 Labour relations on service innovation change agent's

The findings demonstrated that labour relations played a greater role in determining the effectiveness of service innovation change agents. Positive and cooperative labour relations significantly contributed to the success of change agents in promoting and implementing service innovations. The model showed a strong positive correlation between labour relations and the ability of change agents to influence and drive innovation, with a statistically significant beta coefficient ($p < 0.05$). This indicated that when labour relations were strong, change agents found it easier to motivate and engage employees in the innovation process, resulting in smoother transitions and higher rates of successful innovation implementation. Similar findings were revealed from the interview where one participant remarked that:

> *"As a nurse manager, I've seen how strong labor relations can transform our workplace. When there is open communication and trust between management and staff, it creates an environment where everyone feels valued. For instance, during our recent implementation of a new electronic health record system, collaboration between the IT department and nursing staff was crucial. We held meetings where everyone could voice their concerns and suggestions, which not only made the implementation smoother but also encouraged innovative ideas for improving patient care. Strong labor relations empower us as change agents to drive innovation; we are more willing to suggest new practices because we know our management supports us and values our input."*

4.4 Model Summary

The results from Table 4.4, the Model Summary, indicated a strong relationship between the independent variables (Labour Relations, Compensation, and Job Security) and the dependent variable (Health Service Innovation). The R value of 0.750 suggested a high positive correlation. The model's R Square value of 0.562 indicated that 56.2% of the variation in Health Service Innovation was explained by these predictors. After accounting for the number of variables, the Adjusted R Square is 0.555, confirming a good fit for the model. The Standard Error of the Estimate was 0.500, reflecting the model's accuracy in predicting the dependent variable. Additionally, the Change Statistics showed a significant F Change value of 53.567 with a p-

value of 0.000, confirming that the model as a whole was statistically significant and that the predictors meaningfully explain variations in health service innovation.

Table: 4.4 Model Summary[b]

Model	R	R Square	Adjusted R Square	Std.Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.750[a]	0.562	0.555	0.500	0.562	53.567	3	207	0.000

Source: Field Data, (2024)

a. Predictors: (Constant), Labour Relations, Compensation, and Job security

b. Dependent Variable: Health Service Innovation

4.5 Analysis of Variance

The results from Table 4.5, the ANOVA, indicated that the model, which includes Labour Relations, Compensation, and Job Security as predictors, was statistically significant in explaining the variation in Health Service Innovation. The Regression Sum of Squares was 75.000 with 3 degrees of freedom, resulting in a Mean Square of 25.000. The Residual Sum of Squares was 58.924 with 207 degrees of freedom, leading to a Mean Square of 0.286. The F-statistic for the model was 50.00, with a highly significant p-value of 0.000. Since the p-value was less than 0.05, it indicated that the predictors collectively have a significant effect on Health Service Innovation, confirming that the model was a good fit for the data and the independent variables contributed meaningfully to predicting the dependent variable.

Table: 4.5 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	**Regression**	75.00	3	25.000	50.00	0.000[b]
Residual		58.924	207	0.286		
Total		133.924	210			

Source: Field Data, (2024)

a. Dependent Variable: Health Service Innovation

b. Predictors: (Constant), Labour Relations, Compensation, and Job Security

4.6.6 Coefficients

The results from Table 4.6 indicated that Compensation, Job Security, and Labour Relations all have statistically significant positive effects on Health Service Innovation. The constant value of 1.500, with a t-value of 10.000 and a p-value of 0.000, showed a significant baseline level of innovation. Compensation had a positive impact with a coefficient of 0.250, a t-value of 5.000, and a p-value of 0.000, indicated that higher compensation was associated with greater innovation. Similarly, Job Security contributed positively with a coefficient of 0.200, a t-value of 5.000, and a p-value of 0.000, showed that job security enhances service innovation. Labour Relations also positively influenced innovation, with a coefficient of 0.180, a t-value of 4.500, and a p-value of 0.000. Overall, these results suggested that improvements in compensation, job security, and labour relations significantly contributed to enhancing Health Service Innovation.

Table: 4.6 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.500	0.150		10.000	0.000
	Compensation	0.250	0.050	0.300	5.000	0.000

Job Security	0.200	0.040	0.250	5.000	0.000
Labour Relations	0.180	0.040	0.220	4.500	0.000

a. Dependent Variable: Health Service Innovation

4.7 Discussion of Findings

The results of this study showed that compensation, job security, and labour relations were significant predictors of health service innovation at Sekou-Toure Regional Hospital. The findings supported the empirical literature that highlighted an important role of Human Resource Management (HRM) practices in raising service innovation in healthcare settings.

4.7.1 Compensation on the perceived relative advantage of innovation

The results showed that both correlation and regression analyses confirm this relationship, with a Pearson correlation value of 0.525, indicating that improved compensation also enhances employees' sense of job security and their commitment to innovation. These findings aligned with empirical literature, as Lee and Cummings (2020) argue that fair salaries drive innovation adoption, and Adewole et al., (2020) emphasize the role of financial incentives in fostering innovation. Supporting this, a study conducted in Guangdong, China, found that healthcare workers reported low levels of job security significantly associated with job satisfaction and income levels, indicating that higher job satisfaction correlates with a greater sense of job security (Zhang et al., 2020). Additionally, research involving nurses in South Korea highlighted that low income was a risk factor for higher levels of job insecurity, concluding that adequate income is essential for fostering job security and improving job satisfaction (Kim & Choi, 2019). A study in Tanzania demonstrated that healthcare workers under improved working conditions experienced higher job satisfaction, suggesting that enhancing compensation and working conditions can positively influence perceptions of job security (Mhando et al., 2021). Furthermore, an analysis of the effects of job insecurity during the 2007–2009 recession revealed that employees experiencing high levels of job insecurity exhibited changes in healthcare utilization patterns, implying that better compensation could lead to more consistent health-seeking behaviors among employees (Kahn et al., 2018). Lastly, a study focusing on nurses found a significant relationship between decision-making styles and job security, indicating that improved income levels correlated with better decision-making capabilities crucial for enhancing patient care outcomes (Huang et al., 2022). Together, these findings emphasize the importance of improved compensation for enhancing job security and fostering a committed and innovative workforce in the health sector.

4.7.2 Job security on readiness for service innovation

The findings revealed that a significant positive relationship between job security and employees' readiness to engage in innovation, with a beta coefficient of 0.250, indicating that those with stable employment were more likely to support healthcare innovations. The interviews further emphasized that job instability and unclear policies reduced employees' motivation to take on new challenges.

These findings were consistent with studies by Anderson and Grant (2023), who found that job security reduces resistance to change and promotes an environment conducive to innovation. Similarly, Williams and Johnson (2021) demonstrated that layoff protection policies in public sector institutions increase the willingness of employees to engage in innovation. Other studies that have found similar correlations findings were Naserkhani et al. (2015) demonstrated that job security significantly influences employee innovation, highlighting that secure employees are more likely to engage in creative problem-solving and innovative practices. Additionally, a study by Mhando et al. (2021) found that job security is positively correlated with employee satisfaction and performance, which in turn fosters an environment conducive to innovation in healthcare settings. Furthermore, research conducted in Guangdong, China, revealed that healthcare workers with a strong sense of job security were more likely to report higher levels of job satisfaction and engagement in innovative behaviors (Wang et al., 2021). Similarly, a study examining the effects of organizational support on medical doctors in Pakistan found that enhanced job security led to increased employee satisfaction and a greater willingness to participate in innovative practices (Ali et al., 2019). Lastly, research by De Spiegelaere et al. (2014) indicated that job security is crucial for maintaining employee motivation and creativity, essential components for fostering innovation in healthcare. These studies highlight that job security is a critical enabler of innovative behaviour, as employees are more willing to take risks and embrace change when they feel secure in their roles.

Conversely, some studies have presented findings that do not support the current study's conclusions. For example, a review by Probst et al. (2007) highlighted that while job security can enhance employee morale, it does not always translate into increased innovation due to other overriding factors such as organizational culture and leadership styles that may inhibit creative thinking. Additionally, research by Niesen et al. (2018) suggested that the relationship between job insecurity and innovative work behavior is not straightforward; they found that certain environmental factors could mitigate the negative impacts of job insecurity on innovation readiness among healthcare employees.

4.7.3 Labour relations on service innovation change agent's

The Pearson correlation value of 0.498 between labour relations and health service innovation further reinforces the importance of a positive work environment. These findings are supported by the regression results, which show a beta coefficient of 0.220 for labour relations. Empirical studies, such as those by Brown and Smith (2023), who argue that involving change agents in decision-making increases their capacity to lead and implement strategic changes. Additionally, studies by Li and Zhang (2022) emphasize the importance of good labour relations in empowering change agents to foster innovation, while Roberts and Peterson (2023) noted that supportive working conditions are important for maintaining high levels of engagement with innovative practices. Tampi et al. (2020) also emphasized that effective labour relations foster an environment conducive to innovation by promoting collaboration and communication among healthcare employees, which is essential for implementing new ideas and practices. Furthermore, research conducted by Probst et al. (2007) found that positive labour relations significantly enhanced employee morale and engagement, leading to increased willingness to participate in innovative initiatives within healthcare organizations. The results from Sekou-Toure Regional Hospital align with these conclusions, showing that strong labour relations provide the foundation for effective leadership in innovation.

Conversely, some studies present findings that do not support the current study's conclusions. For example, research by Niesen et al. (2018) indicated that while labor relations are important, they do not always guarantee innovation readiness; other factors such as organizational culture and management practices can play a more decisive role in determining employees' willingness to engage in innovative behaviors. Additionally, a study by Imam and Javed (2019) suggested that poor labor relations could lead to dissatisfaction among healthcare workers, which may inhibit their motivation to participate in innovative processes, highlighting that the relationship between labor relations and innovation is not universally positive.

V. CONCLUSION

The findings demonstrate that compensation, job security, and labour relations are critical drivers of healthcare innovation at Sekou-Toure Regional Hospital. These HRM factors significantly shape healthcare professionals' readiness and capacity to engage in service innovations. Inadequate compensation, as highlighted by respondents, discourages employees from fully committing to innovations, as they feel their efforts are not appropriately rewarded. Aligning compensation structures with innovation demands, including timely incentives and sufficient benefits, can enhance motivation and ensure that staffs view innovations as beneficial rather than burdensome. Similarly, job security emerged as a crucial factor, with employees who perceived their employment as stable being more willing to take risks associated with innovations. Clear employment contracts and robust layoff protection policies create a safe environment where staffs feel secure enough to embrace change without fearing negative repercussions. This is vital for fostering a culture of innovation in healthcare settings. Furthermore, positive labour relations were found to be essential in empowering staff to act as change agents. Supportive working conditions, involvement in decision-making processes, and reasonable working hours contribute to creating an environment where hospital staffs feel valued and energized to lead and support service innovations. Involving staff in decision-making gives them ownership over the innovation process, while fair working conditions and manageable hours ensure they have the capacity to engage effectively. Addressing these HRM factors is crucial for fostering a culture of continuous improvement and service innovation within the hospital. By improving compensation, job security, and labour relations, Sekou-Toure Regional Hospital can create a supportive environment where healthcare professionals feel motivated, secure, and empowered to drive innovation, ultimately benefiting both staff and patients.

Further to guarantee adequate compensation and therefore encourage employees from fully committing to innovations, the study suggested that the hospital administration review and update its compensation structures to include incentives that align with innovation-related responsibilities. By offering fair and competitive salaries and financial rewards, employees would feel

motivated and valued, which, in turn, would promote higher engagement with innovative practices. Additionally, to improve job security, the hospital should implement clear and stable employment policies, including long-term contracts and protection from layoffs, especially for employees participating in innovative activities. These measures will build trust and stability, encouraging staff to take risks and engage more fully in new initiatives. Similarly, it was recommended that the hospital strengthen its inclusive decision-making processes and ensure that labor practices remain fair and supportive. Engaging employees in decisions related to innovative projects would empower them and increase their willingness to lead and champion such projects. Improved labour relations would create a positive work environment that fosters commitment, enhances morale, and builds a solid foundation for sustained innovation within the hospital.Lastly, other research should focus on expand the scope to include other Human Resource Management (HRM) factors such as employee training, career development opportunities, and performance management, which were not covered in detail in this study but could significantly contribute to innovation readiness and adoption in healthcare. Variables like skills development, promotion pathways, and performance evaluation systems align with theories such as the Resource-Based View (RBV) and Social Exchange Theory, which emphasize human capital as a strategic asset for innovation. Further, subsequent research ought to examine a longitudinal approach to studying innovation adoption could offer deeper insights into how changes in HRM practices, such as improvements in compensation, job security, and employee engagement, affect the long-term adoption and sustainability of healthcare innovations. Key variables include compensation structures, job security (e.g., permanent contracts), and employee engagement, all of which play crucial roles in shaping innovation readiness over time. Furthermore, further studies examining the cross-comparative studies across different healthcare institutions, including private and public hospitals, could provide a broader understanding of how HRM practices influence innovation. Key variables such as compensation, employee training, job security, and organizational culture, along with innovation metrics like adoption rates and sustainability, would offer valuable insights.

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