

Health Sector in Nigeria: Risk Management Viewpoint

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Abstract— The study examined the importance of risk management in strengthening the Nigerian healthcare system, focusing on three key areas: health workforce, health infrastructure, and health financing. The objectives set to achieve the main goal of the study include examining how risk management practices impact the performance of the health workforce in the Nigerian health sector, determining how risk management practices improve health infrastructure in the Nigerian health sector, and assessing whether risk management practices enhance health financing in the Nigerian health sector. The study used a population size of 1,200, from which a sample size of 300 was derived using Taro Yamane's formula. Descriptive statistics, including percentages and frequency, were used for the analysis, and ANOVA was utilized to test the hypotheses. A total of 300 questionnaires were distributed to health workers, including doctors, nurses, laboratory scientists, and health assistants. The study recommends that the health sector implement a well-designed risk management policy and systematic employee training to ensure safe working conditions for health workers.

Keywords— risk management, health sector, health workforce, health infrastructure, health financing.

INTRODUCTION

1.1 Background to the Study

Healthcare systems worldwide face risks that, if unaddressed, can undermine their effectiveness. In developed countries like the United States and the United Kingdom, risk management frameworks are integral to healthcare delivery. These frameworks focus on reducing errors, enhancing patient safety, and ensuring resource efficiency (Wu, Lin, & Yen 2015). For instance, implementing standards such as ISO 31000 has significantly minimized preventable risks and fostered a proactive safety culture (Tasneem, Hossain, Alam, & Rahman, 2018). The success of these systems is largely attributed to advanced technologies, comprehensive policies, and ongoing staff training.

In Africa, particularly sub-Saharan countries, healthcare systems encounter unique challenges, including resource limitations, a high disease burden, and inadequate workforce distribution (Abor & Abor, 2021). In Ghana, for example, the adoption of structured risk management practices has improved infrastructure utilization and addressed workforce challenges (Frempong, Adu, Bonsu, Boateng, & Agyemang, 2019). These examples highlight the potential of tailored risk management solutions in addressing local healthcare needs.

In Nigeria, the healthcare system operates within a complex environment, characterized by insufficient infrastructure, financial instability, and workforce

challenges. Institutions like Jos University Teaching Hospital (JUTH) are particularly affected, facing issues such as equipment failures, workforce burnout, and irregular funding. These challenges result in diminished healthcare quality and increased risks to patients and staff (Adepoju & Esan, 2023). Addressing these risks requires integrating risk management strategies into healthcare planning, policy development, and daily operations.

By examining international best practices and aligning them with the realities of Nigeria's healthcare landscape, this study aims to underscore the importance of risk management in achieving sustainable improvements in health outcomes.

1.2 Statement of the Research Problem

Despite improvements in healthcare delivery, the Nigerian health sector remains vulnerable to a variety of risks, including human errors, infrastructure deficiencies, and epidemic outbreaks.

These risks pose serious threats to patient safety, financial stability, and public trust. Many healthcare institutions in Nigeria lack effective risk management frameworks, making them ill-prepared to handle unforeseen challenges. Developing and implementing robust risk management practices is critical for improving healthcare outcomes and ensuring the sector's resilience (Owolabi, Oloyede, Iriyemi, & Akinola, 2017).

1.3 Research Hypotheses

- Risk management practices do not significantly influence the performance of the health workforce in the Nigerian health sector.
- Risk management practices have no significant impact on health infrastructure in the Nigerian health sector.
- Risk management practices do not significantly affect health financing in the Nigerian health sector.

1.4 Significance of the Study

This study offers valuable insights for a range of stakeholders, including students, academics, policymakers, and healthcare practitioners. For students and researchers, it provides a foundation for understanding risk management within the healthcare sector and serves as a reference for future studies. Policymakers can leverage the findings to develop targeted interventions that address systemic vulnerabilities, while healthcare managers can use them to optimize resource allocation and enhance safety standards.

The study's emphasis on workforce safety, infrastructure improvement, and financial stability ensures its relevance to improving the overall efficiency and resilience of the healthcare system. Patients and the broader public will benefit from a system that prioritizes safety and quality of care.

1.5 Scope of the Study

The study focuses on risk management practices within the Nigerian healthcare system, using Jos University Teaching Hospital (JUTH) as a case study. It explores the impact of these practices on three critical areas: workforce performance, infrastructure improvement, and financial management. By addressing these areas, the study aims to provide a comprehensive understanding of the role of risk management in strengthening healthcare delivery in Nigeria.

REVIEW OF LITERATURE

2.1 Concept, Theory and Empirical Framework

Risk management in healthcare involves identifying, assessing, and addressing risks to reduce harm to patients, staff, and the organization. It aims to prevent adverse events, ensure compliance with regulations, and maintain the quality of care.

Risks in this context may include medical errors, financial difficulties, legal issues, and broader challenges like pandemics.

According to Vincent, (2017), the core of risk management is patient safety. They emphasize that healthcare organizations must adopt strategies to reduce harm, such as refining clinical processes, encouraging the reporting of errors, and building a culture of safety. This approach requires commitment from everyone, from frontline healthcare workers to leadership teams.

Smith & Wood. (2020) highlight the role of governance in effective risk management. They stress that collaboration across different teams and stakeholders is essential. For instance, providing regular training, using technology to monitor potential risks, and fostering open communication help mitigate risks and improve overall outcomes.

Davis, Johnson, & Smith. (2019) discuss the financial and legal dimensions of risk management in healthcare. They point out that failing to follow established standards or maintain accurate records can lead to lawsuits and damage an organization's reputation. To address these risks, they recommend implementing strong policies, conducting routine audits, and adhering to accreditation requirements.

Health Workforce: The healthcare workforce in Nigeria plays a pivotal role in delivering quality services but faces significant risks, including burnout, exposure to pathogens, and inadequate training. Effective risk management strategies, such as regular training programs and improved working conditions, are essential to mitigate these risks (Adepoju & Esan, 2023). Proactive measures to address workforce challenges can enhance job satisfaction and performance, leading to better patient outcomes (Innocent, Ogunsakin, Adegba, & Ajayi, 2022).

Health Infrastructure: Health infrastructure encompasses the physical facilities, equipment, and organizational frameworks necessary for delivering healthcare services. In Nigeria, many healthcare facilities are outdated or poorly maintained, posing safety risks to patients and staff (Gbadago, Amedome, & Honyenuga, 2017). Risk management practices, such as preventive maintenance and disaster preparedness, can significantly improve infrastructure reliability. For instance, adopting public-private partnerships has proven effective in addressing funding gaps and modernizing facilities (Frempong et al., 2019).

Health Financing: Health financing is critical to ensuring the sustainability of healthcare systems. In Nigeria, challenges such as inefficient resource

allocation and corruption hinder effective financial management (Owolabi et al., 2017). Risk management in this area focuses on implementing transparent budgeting processes, promoting accountability, and exploring innovative financing mechanisms like health insurance schemes (Johnson, 2020). These measures help reduce financial risks and ensure resources are directed toward priority areas.

Ways to Improve the Effectiveness of Risk Management in the Nigerian Health Sector

Workforce Development: Regular training programs and leadership development initiatives can empower healthcare professionals to identify and manage risks effectively. Encouraging a culture of safety and open communication is also crucial (Patel, 2021).

Infrastructure Maintenance: Implementing preventive maintenance programs and investing in disaster preparedness can enhance the reliability of healthcare facilities. Risk assessments should be integrated into infrastructure planning and upgrades (Tasneem et al., 2018).

Financial Transparency: Strengthening financial management systems through transparent budgeting and accountability mechanisms can improve resource utilization. Expanding health insurance coverage and risk-sharing initiatives can also mitigate financial risks (Frempong et al., 2019).

Policy Implementation: Enforcing policies that align with international best practices, such as ISO 31000, can standardize risk management procedures across healthcare institutions (Wu et al., 2015).

The study is anchored on two key theories:

- **High Reliability Theory (HRT):** This theory emphasizes organizational mindfulness, continuous learning, and adaptability in managing risks within complex environments. HRT is particularly relevant for the healthcare sector, which operates under dynamic and high-stakes conditions. It advocates for a culture of safety and proactive risk identification to prevent errors (Rochlin, 1996). The relevance of HRT lies in its focus on maintaining reliability and minimizing system failures despite challenging circumstances.
- **Agency Theory:** Proposed by Jensen and Meckling (1976), this theory explores the relationship between principals (stakeholders) and agents (managers or healthcare practitioners). It underscores the importance of aligning the interests

of stakeholders through transparent risk management practices. This theory is applicable as it highlights the need for accountability and strategic decision-making to mitigate risks and build trust in the Nigerian healthcare system.

Several studies have highlighted the significance of risk management in healthcare, some of which are: Adepoju and Esan (2023) examined risk management practices in a Nigerian teaching hospital and found that regular training and incident reporting significantly improved workforce safety. Johnson (2020) investigated the role of financial risk management in hospitals and emphasized the need for transparent processes to reduce inefficiencies. Tasneem et al. (2018) explored the implementation of ISO 31000 standards in healthcare and demonstrated its effectiveness in enhancing infrastructure and operational safety. Frempong et al. (2019) analyzed public-private partnerships in Ghana and reported improved infrastructure reliability and resource allocation. Innocent et al. (2022) reviewed occupational hazards in Nigerian primary healthcare facilities, highlighting the importance of workforce-focused risk management practices.

The review highlights the importance of risk management in addressing workforce, infrastructure, and financial challenges in the healthcare sector. Theoretical frameworks such as High Reliability Theory and Agency Theory provide a foundation for understanding how organizations can achieve safety and accountability.

Empirical evidence underscores the need for tailored strategies that align with Nigeria's unique healthcare context. By integrating international best practices and addressing local challenges, risk management can significantly improve healthcare outcomes in Nigeria.

3. METHODS

The population for this study consists of 1,200 healthcare workers employed at Jos University Teaching Hospital (JUTH) in Plateau State.

This group includes 500 doctors, 400 nurses, 150 laboratory scientists, and 150 health assistants. Focusing on JUTH provides an opportunity to analyze risk management practices within a typical Nigerian healthcare institution, reflecting workforce dynamics, infrastructure issues, and funding challenges.

To determine the sample size, the study applied Taro Yamane's formula:

Where:

= total population (1,200)

= margin of error (0.05)

Substituting the values:

The study selected a sample size of 300 respondents. A simple random sampling technique was used to ensure every individual in the population had an equal chance of being included. This method reduces selection bias and enhances the representativeness of the sample. The data was gathered directly from respondents using structured questionnaires designed to assess risk management practices and their impacts on healthcare

delivery. The data collected was analyzed using both descriptive and inferential statistical methods. Descriptive statistics, such as percentages, frequencies, and mean values, were used to summarize the data. Inferential statistics, particularly Analysis of Variance (ANOVA), were employed to test the hypotheses and assess the relationships between variables.

4. DATA ANALYSIS

4.1 Analysis of Research Questions

The responses to the research questions were analyzed to evaluate the role of risk management in the Nigerian healthcare sector. The results are summarized below:

Research Question	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Risk management improves workforce performance.	27	38	7	22	6
Risk management enhances health infrastructure.	9	31	3	34	23
Risk management strengthens financial management in the healthcare sector.	14	47	2	24	13

4.2 Test of Research Hypotheses

The hypotheses were tested using Analysis of Variance (ANOVA) to examine the relationships between risk management practices and healthcare outcomes. The results are outlined below:

Hypothesis 1:

Null Hypothesis (H0): Risk management practices do not significantly influence the performance of the health workforce.

ANOVA Results:

F-statistic: 5.23

P-value: 0.02

Decision: Since the p-value is less than 0.05, the null hypothesis is rejected. Risk management practices significantly influence workforce performance.

Hypothesis 2:

Null Hypothesis (H0): Risk management practices do not significantly improve health infrastructure.

ANOVA Results:

F-statistic: 4.85

P-value: 0.03

Decision: Since the p-value is less than 0.05, the null hypothesis is rejected. Risk management practices significantly improve health infrastructure.

Hypothesis 3:

Null Hypothesis (H0): Risk management practices do not significantly impact financial management.

ANOVA Results:

F-statistic: 6.12

P-value: 0.01

Decision: Since the p-value is less than 0.05, the null hypothesis is rejected. Risk management practices significantly impact financial management.

4.3 Discussion of Findings

The findings reveal that risk management plays a critical role in enhancing workforce performance, improving infrastructure, and strengthening financial management in the healthcare sector. The significant influence on workforce performance underscores the need for training and resource allocation to ensure safety and productivity. The improvement in health infrastructure highlights the importance of preventive maintenance and disaster preparedness. Lastly, the positive impact on financial management emphasizes the necessity of transparent budgeting and innovative financing

mechanisms. These findings align with previous research by Adepoju & Esan, 2023; Johnson, 2020), which emphasize the importance of tailored risk management strategies to address challenges in the healthcare sector.

5. Recommendations

Based on the findings, the following recommendations were proposed:

- **Implementation of Comprehensive Risk Management Policies:** Healthcare institutions should adopt detailed risk management policies that address workforce safety, infrastructure maintenance, and financial management. These policies should align with international standards while being tailored to local contexts.
- **Regular Training and Capacity Building:** Regular training programs should be organized for healthcare workers to enhance their understanding of risk management practices. This will ensure they are equipped to identify, assess, and address risks effectively.
- **Strengthening Infrastructure Maintenance:** Preventive maintenance schedules should be established for healthcare facilities to minimize infrastructure failures. Investments in modern equipment and disaster preparedness programs should also be prioritized.
- **Promoting Transparency in Financial Management:** Healthcare institutions should adopt transparent budgeting processes and explore innovative financing mechanisms such as health insurance schemes to improve financial sustainability.
- **Expanding the Scope of Future Research:** Future studies should include multiple healthcare institutions across various regions in Nigeria to provide a broader understanding of risk management practices. Additionally, qualitative methods such as interviews or case studies should be incorporated to gain deeper insights into the challenges and opportunities in the healthcare sector.

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