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Employee Expertise Capital and Innovativeness of Private Hospitals in Delta State, Nigeria

Ajieh, I.K.[1], Okeke, C.O. (Ph.D)[2] & & Williams, Gbenga (Ph.D)[3*]
[1&2]Department of Business Administration, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Anambra State, Nigeria
[3]Department of Business Administration, Hezekiah University, Umudi Nkwerre, Imo State, Nigeria
Corresponding Email: williamsgbenga80@gmail.com

ABSTRACT: This study investigated the relationship between employee expertise capital and innovativeness of private hospitals in Delta State, Nigeria. The study was motivated by challenges in the healthcare sector, including slow adoption of innovative practices, limited strategic learning, and inadequate adaptability to changing conditions, which hinder service quality and operational efficiency. Specifically, the research examined the relationship between professional knowledge competence and adaptability to changing conditions; ascertained the relationship between specialized skills and strategic learning programs; determined the relationship between focused training programs and new solution processes; and evaluated the relationship between problem-solving abilities and adaptability to changing conditions in private hospitals in Delta State. The study was anchored on Human Capital Theory and the Resource-Based View (RBV) of the firm. A survey research design was adopted. The population comprised 1,400 staff across 20 private hospitals in Delta State, with a sample size of 302 respondents determined using the Krejcie and Morgan table. Stratified random sampling ensured proportional representation across senatorial zones. Data was collected using structured questionnaires, 302 copies of questionnaire were distributed and 252 copies were valid for analysis, validated through face and content validation, and tested for reliability using Cronbach's Alpha (α), with all sections exceeding the acceptable threshold of 0.70. Data analysis was conducted using descriptive statistics and Pearson Product Moment Correlation Coefficient at a 0.05 level of significance. The findings revealed a moderate positive and significant relationship exist between professional knowledge competence and adaptability to changing conditions; strong positive and significant relationships between specialized skills and strategic learning programs; focused training programs and new solution processes; and problem-solving abilities and adaptability to changing conditions. The study concluded that employee expertise capital significantly enhances hospital adaptability, strategic learning, and innovativeness. It recommended continuous professional development, recruitment of specialized staff, targeted training programs, and cultivation of problem-solving abilities.

Keywords: Employee Expertise Capital, Innovativeness, Professional Knowledge Competence, Specialized Skills, Focused Training Programs, Problem-Solving Abilities, Private Hospitals.

INTRODUCTION

Innovativeness has become a defining factor for organizational survival and competitiveness in today's dynamic environment. In the healthcare industry, innovativeness refers to the ability of hospitals to adopt new technologies, introduce novel treatment methods, improve

service processes, and respond creatively to emerging health challenges. Globally, hospitals that emphasize innovation have been found to provide higher-quality patient care, achieve operational efficiency, and adapt effectively to crises such as the pandemic. This growing recognition has made innovativeness an essential measure of hospital performance in both developed and developing economies (Ehuwayijomo, 2024; Nkoli, 2013).

Employee expertise capital refers to the collective knowledge, technical skills, professional competencies, and experience possessed by employees that enhance an organization's capacity for innovation, productivity, and competitive advantage (Gary Becker, 1964; Jay Barney, 1991; Chendo & Oguanobi, 2021). It is regarded as a strategic component of human and intellectual capital that enables organizations to create value, implement new ideas, and sustain long-term performance (Thomas A. Stewart, 1997; McKinsey Global Institute, 2022). Globally, employee expertise capital is increasingly recognized as the intellectual foundation that drives innovation. The McKinsey Global Institute (2022) emphasizes that expertise capital defined as the knowledge, skills, and experience possessed by employees creates unique competitive advantages that enable organizations to generate, adapt, and implement new ideas effectively (Ogbunankwor, Chendo & Nwangene, 2022).

In the context of Nigeria, the health sector continues to grapple with numerous challenges, including inadequate manpower, brain drain, and limited access to modern healthcare technologies. These challenges have constrained the innovative capacity of both public and private hospitals (Ajoseh, Adewale, & Onifade, 2024; Emeka-Nwokeji, Nangih, Chendo & Eboatu, 2021). The Lancet Nigeria Commission (Abubakar et al., 2022) highlighted that the development of human capital is vital for improving health service delivery and innovation. Without strong employee expertise capital, hospitals struggle to adopt new technologies, improve service efficiency, or meet the growing expectations of patients.

In Delta State specifically, the Delta State Ministry of Health (2024) estimates that while private hospitals constitute more than 70% of registered secondary healthcare facilities, less than 40% of these facilities conduct structured continuous professional development (CPD) training annually. This gap directly affects the adoption of innovative medical practices and digital systems. Furthermore, data from the World Bank (2023) indicate that Nigeria spends approximately 3.6% of its GDP on healthcare, which is significantly lower than the 15% target set under the Abuja Declaration. Limited funding constrains investments in advanced medical technologies and staff capacity development.

Empirical studies conducted in Delta State reveal measurable differences in innovation performance among private hospitals based on the intensity of staff development initiatives. Ehuwayijomo (2024), in a survey of 128 healthcare professionals across 15 private hospitals in Asaba and Warri, found that hospitals implementing structured continuous professional development (CPD) programs recorded a 42% higher adoption rate of digital diagnostic tools and electronic medical records compared to facilities without formal training frameworks. Similarly, Josiah et al. (2024) reported that hospitals that allocated at least 5% of their annual operating budget to employee training and knowledge-sharing workshops were significantly more likely ($\beta = 0.61$, $p < 0.01$) to introduce new care protocols and patient-centered service innovations.

Therefore, this study focuses on four key components of employee expertise capital: professional knowledge competence, specialized skills, focused training programs,

and problem-solving abilities. Professional knowledge competence refers to employees' mastery of relevant clinical and managerial knowledge and their ability to apply it effectively in diverse situations. Specialized skills denote the technical and discipline-specific abilities such as diagnostics, surgery, and technological operation that differentiate professional expertise. Focused training programs involve structured capacity-building activities designed to update and expand employees' knowledge base. Problem-solving abilities capture employees' capacity to identify, analyze, and resolve complex operational or clinical issues creatively.

Statement of the Problem

Private hospitals in Delta State would consistently demonstrate high levels of innovativeness, driven by a skilled and continuously developing workforce. In such a scenario, hospital teams would routinely adopt evidence-based medical practices, integrate digital health technologies, and design patient-centered processes that improve service quality and operational efficiency. However, private hospitals across Delta State differ significantly from this ideal. Despite the entrepreneurial energy of private healthcare providers, these hospitals often operate under conditions that restrict their innovative capacity.

Private hospitals face limited training budgets, inadequate exposure to emerging medical technologies, and persistent staff turnover that depletes institutional knowledge. Furthermore, there are weak mechanisms for knowledge sharing and collaboration across professional categories, leading to low adoption of innovative practices such as telemedicine, electronic health records, and performance-based service delivery models. Specific challenges contribute to this overarching problem. First, there are clear gaps in professional knowledge competence due to irregular or outdated training and insufficient access to current medical information. Second, specialized skills among healthcare workers are diminishing as a result of high turnover and limited professional growth opportunities within private hospitals. Third, many institutions lack well-designed and focused training programs that align with organizational goals and innovation needs. Fourth, employees' problem-solving abilities remain underdeveloped due to poor teamwork culture, inadequate data use for decision-making, and the absence of structured platforms for innovation or feedback.

Consequently, the main problem facing private hospitals in Delta State is that employee expertise capital is underutilized and poorly developed as a resource for innovation. This deficiency has led to slow adoption of new technologies, inconsistent quality of service, low adaptability to modern healthcare models, and limited organizational competitiveness. The present study seeks to fill this gap by examining how these four dimensions influence the level of innovation among private hospitals and provide evidence-based insights that will guide hospital administrators, policymakers, and training institutions in designing strategies that build employee expertise capital and promote continuous innovation within Delta State's private healthcare sector.

Objectives of the Study

The broad objective of the study was to examine the relationship between employee expertise capital and innovativeness of Private Hospitals in Delta State, Nigeria. Specifically, the study sought to:

(i) Examine the relationship between professional knowledge competence and adaptability to changing conditions;
(ii) Ascertain the relationship between specialized skill and strategic learning programs/capabilities;

(iii) Determine the relationship between focused training programs and new solution processes

(iv) Evaluate the relationship between problem-solving abilities and adaptability to changing conditions of Private Hospitals in Delta State, Nigeria.

LITERATURE REVIEW

Employee Expertise Capital

Employee expertise capital is best understood as a focused aspect of human or intellectual capital that represents the stock of explicit and tacit expertise held by employees. It includes their domain knowledge; technical skills, problem-solving ability, and experiential judgment that together enable effective performance and knowledge creation. Recent studies emphasize that expertise capital goes beyond formal education or credentials to include the cumulative effect of work experience, transferable skills, and embedded tacit knowledge. Organizations are now viewing expertise capital as a strategic asset that must be deliberately managed rather than assumed to exist naturally (McKinsey 2022; Deloitte, 2023; Anetoh, Anetoh-Ajakpo, Chendo & Oranye, 2025).

Professional Knowledge Competence

Professional knowledge competence refers to the integrated capacity of an individual to effectively combine knowledge, skills, attitudes, and values in a given professional context. It is not limited to the possession of factual knowledge but also includes the ability to apply such knowledge appropriately to solve real-world problems. Contemporary scholars emphasize that professional competence is a developmental and context-dependent construct that becomes evident through performance and decision-making in professional practice. In this view, competence represents a dynamic process where individuals continuously adapt their expertise to meet changing work demands and organizational expectations (Mulder, 2021; Palermo et al., 2022; Chukwuma, Okaro, Anyanwu, Ogbonna & Mazeli, 2023; Augustina, 2023).

Specialized Skill

The concept of specialized skill has gained increased attention in healthcare literature, particularly in relation to workforce competence, quality of care, and technological adaptation. Specialized skill refers to the advanced or specific capabilities that healthcare professionals acquire through targeted education, experience, and continuous professional development. According to Chike-Harris et al. (2021), specialized skills are those that go beyond basic clinical knowledge and enable practitioners to perform complex procedures, interpret diagnostic data, and apply evidence-based interventions in specialized fields. Similarly, Chua and Kim (2022) describe specialized skills as distinctive professional competencies that enhance precision, patient outcomes, and healthcare innovation. The World Health Organization (2021) emphasizes that specialized skills are critical in achieving universal health coverage and ensuring that healthcare delivery meets modern clinical standards.

Focused Training Programs

Focused training programs in healthcare are structured, short- or medium-term educational initiatives that aim to address specific competency gaps or skill sets among health professionals. These programs are designed to be narrow in scope, focusing on the acquisition of targeted skills needed for specialized healthcare functions rather than generalist knowledge. Giovanelli, Rotondo, and Fadda (2024) define focused training programs as structured educational interventions tailored to meet distinct demands within professional practice, often developed to fill gaps in existing university or institutional curricula. Similarly, the PROFORMA Short-Term Training (STT) initiative describes focused training as short, intensive sessions aimed at enhancing knowledge, attitudes, and skills within

pharmacovigilance and drug safety systems in East Africa (PROFORMA STT, 2024). In both perspectives, the defining features of focused training programs are their specificity, skill orientation, and time-bounded nature (Giovanelli et al., 2024; Chinwoke, Madubuike, Adiga & Mazeli, 2025).

Problem-solving Ability

Problem-solving ability in healthcare is recognized as one of the most essential professional competencies that determine the quality and safety of patient care. It is defined as a complex cognitive and behavioral process that integrates reasoning, knowledge, and analytical strategies to address clinical challenges effectively. According to Huang et al. (2023), problem-solving ability involves the capacity to identify a situation as a problem, select suitable actions, and apply these actions to achieve expected healthcare outcomes. Jo and Hwang (2022) also define it as the ability of healthcare professionals to utilize their knowledge, analyze patient information, and make decisions under uncertain and dynamic conditions. In this sense, problem-solving in healthcare is an active process of applying critical thinking, clinical reasoning, and creativity to detect, analyze, and respond to patient needs in a structured and evidence-based manner (Huang et al., 2023; Jo & Hwang, 2022; Ejinkonye, Mazeli, Leviticus & Nwosu, 2024; Ogbunuju, Chendo & Nkoli, 2025).

Innovativeness

Innovativeness in healthcare has been defined in multiple ways by different scholars and organizations. The World Health Organization describes health innovation as novel approaches that accelerate positive health impact. Academic sources emphasize that innovativeness encompasses both the novelty of ideas and the readiness of individuals or systems to adopt them. For instance, a study in nursing defines innovativeness as a behavior dependent on the perceived attributes of the innovation, highlighting how attitudes toward new ideas influence willingness to innovate. In organizational terms, researchers describe innovativeness as a social process involving the generation, acceptance, and implementation of new processes, products, or services within a healthcare setting. These definitions collectively suggest that in healthcare, innovation involves the introduction of new treatments, technologies, or management methods, while innovativeness reflects the capability and inclination of individuals and organizations to create and implement such improvements (World Health Organization, 2024; Leary et al., 2024; Ananwude, Ngaikedi & Mazeli, 2026).

Adaptability to Changing Condition

Adaptability to changing conditions refers to the ability of healthcare professionals and organizations to adjust effectively to evolving clinical, technological, and environmental circumstances. In modern healthcare, adaptability has become an essential competency that enables resilience and continuous improvement amid uncertainty. Cummings and Buse (2021), adaptability involves the cognitive, emotional, and behavioral flexibility required to respond constructively to new challenges in healthcare delivery. Similarly, the World Health Organization (2022) describes adaptability as the capacity of health systems to adjust policies and practices in response to dynamic health needs, emerging diseases, and technological innovations. This definition emphasizes that adaptability is not only a personal attribute but also an organizational necessity in ensuring sustainable healthcare outcomes.

Strategic Learning Programs/Capabilities

Strategic learning programs or capabilities in healthcare refer to structured and intentional approaches to workforce development that align learning activities with organizational objectives. Rather than focusing only on compliance-based or short-term training, strategic learning is designed to ensure that healthcare professionals continuously acquire and apply knowledge that supports

institutional goals and patient outcomes. de Kok et al. (2023), strategic learning capabilities are the attributes and processes that enable healthcare organizations to absorb new information and use it to improve performance. Similarly, Furnival (2025) explains that strategic learning programs are not merely educational exercises but purposeful systems that connect learning to business results and patient care objectives. This understanding highlights that strategic learning is a deliberate, results-driven process embedded in the organizational strategy of healthcare institutions (Mazeli, Adigwe & Ananwude, 2020).

New Solution Processes

The concept of new solution processes in healthcare refers to the systematic methods and innovative approaches used to identify, design, and implement effective responses to emerging clinical and organizational challenges. According to Ojo et al. (2022), new solution processes involve the use of creative and evidence-based methods to develop solutions that improve patient outcomes and system efficiency. These processes often combine innovation, technology, and collaboration to address gaps in healthcare delivery. Similarly, the World Health Organization (2021) defines new solution processes as dynamic mechanisms through which healthcare systems integrate new knowledge, technology, and partnerships to enhance service quality and resilience. In essence, new solution processes represent a shift from traditional problem-solving toward continuous innovation and adaptation in healthcare environments (Mazeli, Ejinkonye, Uloghobui & Onehi, 2024; Chendo, 2019).

Theoretical Framework

Human Capital Theory

This study is anchored on the Human Capital Theory propounded by Theodore W. Schultz (1961) and further developed by Gary S. Becker (1964) and Jacob Mincer (1974). The theory emphasizes that individuals possess knowledge, skills, experience, and abilities which can be developed through investment in education, training, and healthcare to enhance productivity. According to Becker (1964), human capital refers to the economic value of an employee's set of skills and knowledge that contribute to organizational growth. In the healthcare sector, employee expertise represents a form of human capital that influences not only operational efficiency but also the institution's innovative performance.

In the context of private hospitals in Delta State, employee expertise capital which includes medical knowledge, professional qualifications, problem-solving skills, and adaptability serves as a crucial form of human capital. The more skilled and knowledgeable the workforce, the more capable hospitals become in developing innovative solutions to clinical and operational challenges. According to Al-Abbadi and Hamad (2021), healthcare institutions that invest in their human capital through professional development programs are more likely to introduce new methods of care delivery and technological applications.

Resource-Based View (RBV) of the Firm

The second theory underpinning this study is the Resource-Based View (RBV) of the firm, initially introduced by Birger Wernerfelt (1984) and later refined by Jay Barney (1991). The theory posits that the internal resources of an organization including its people, knowledge, and capabilities are key sources of sustainable competitive advantage. Barney (1991) emphasizes that for a resource to provide a competitive advantage, it must be valuable, rare, inimitable, and non-substitutable (VRIN framework). In the context of healthcare, employee expertise and innovative practices represent such strategic resources, as they enable hospitals to deliver superior patient care, develop new medical solutions, and respond adaptively to changing healthcare demands.

In the context of private hospitals in Delta State, the RBV suggests that the ability to develop, retain, and deploy skilled professionals is a strategic advantage that drives innovativeness. Employee expertise capital, when effectively managed, becomes

an internal capability that enhances the organization's responsiveness to patient needs and technological changes. The RBV supports the argument that hospitals in Delta State can achieve sustained innovation by strategically developing and managing their employee expertise capital.

Empirical Review

Okechukwu and Eze (2022) conducted a study to determine the influence of hospital information systems, a core component of structural capital, on patient satisfaction in private hospitals within Enugu State, Nigeria. The researchers targeted a sample of 280 patients across five carefully selected private hospitals using purposive sampling. Data were collected using a structured questionnaire specifically designed to measure patients' perceptions regarding the efficiency of hospital information flow, clarity of communication, and timeliness of service delivery. The internal consistency of the instrument was tested and yielded a Cronbach's alpha of 0.87, confirming its reliability. The study findings revealed a robust positive relationship between the presence of efficient hospital information systems and high levels of patient satisfaction. Patients particularly noted improvements in reduced waiting times, improved care coordination, and overall better communication of medical information.

Chima and Uduak (2021) explored the relationship between medical infrastructure and administrative procedures, both integral elements of structural capital, and patient satisfaction in tertiary healthcare institutions in Southern Nigeria. A total of 320 patients participated in the cross-sectional study, with data gathered via a standardized and pre-tested questionnaire. The analysis highlighted that the presence of modern infrastructure, including digital record systems and automated administrative workflows, had a statistically significant impact on patient satisfaction. The study found that patients appreciated clear, structured administrative procedures, and timely access to services. These findings suggest that enhancing structural capital in healthcare institutions can improve patients' perceptions of quality and speed of treatment, ultimately boosting satisfaction.

Kilonzo and Mwangi (2020) examined the influence of various dimensions of structural capital on the delivery of healthcare services and patient satisfaction in Nairobi County's public health centers. The study utilized a stratified sampling technique to select 260 respondents who received services from various clinics. The data collection instrument focused on internal communication mechanisms, workflow systems, and knowledge databases, all of which are considered critical components of structural capital. The findings indicated a strong positive correlation between well-coordinated internal processes and high patient satisfaction. Among the measured dimensions, workflow efficiency emerged as the most significant contributor to patients' positive evaluations, suggesting that streamlining operations can greatly enhance perceived service quality.

In a study conducted by Adebayo and Olanrewaju (2023), the impact of structural capital on patient loyalty and satisfaction was examined within the context of Lagos-based private hospitals. The researchers adopted a random sampling method to select 300 patients from six healthcare facilities. A structured questionnaire based on a Likert scale was employed, and regression analysis was used to test the relationships among the variables. The results demonstrated that structural capital components such as electronic record-keeping, standardized procedures, and strategic facility layout significantly influenced patient satisfaction and trust. The study concluded that structural enhancements not only foster efficient service delivery but also cultivate patient loyalty by creating consistent and predictable healthcare experiences.

Moyo and Ncube (2021) carried out an empirical investigation into how structural

capital affects patients' perceptions of service quality in Zimbabwean private hospitals. The study sampled 200 patients using a standardized survey instrument, which assessed hospital layout, the availability of modern medical technologies, and support systems. These elements of structural capital were found to significantly influence patient satisfaction, particularly in emergency and outpatient departments. The researchers reported that patients were more satisfied in hospitals where structural capital supported rapid response times and seamless transitions between departments. This study emphasized the role of physical and technological infrastructure in enhancing patients' overall healthcare experiences.

Okonkwo and Nwachukwu (2023) investigated the effectiveness of structured service delivery models on improving patient satisfaction in multi-specialist hospitals located in Delta State, Nigeria. A simple random sampling technique was employed to select 250 patients who had utilized hospital services. The study used a regression model to examine the relationship between structured care pathways, including automated scheduling and follow-up systems, and satisfaction. Findings indicated that patients valued predictable service delivery models, particularly those managing chronic illnesses. The research concluded that structured systems allowed hospitals to offer timely and personalized care, resulting in higher levels of satisfaction among patients.

Adegbite and Hassan (2022) focused on public-private partnership hospitals in Ogun State to assess how structural capital contributes to patient satisfaction. A survey involving 280 patients was conducted, examining factors such as hospital facility design, knowledge management systems, and the implementation of standard operating policies. Their analysis showed that hospitals with clearly articulated procedures and supportive infrastructure were more likely to report higher levels of patient satisfaction. In particular, patients emphasized the importance of accessible policy frameworks and intuitive hospital environments that enabled them to navigate the healthcare system more efficiently.

METHODOLOGY

This study adopted a survey research design, which allowed the researcher to gather data from a large number of respondents within a relatively short time. It was appropriate for investigating the relationship between employee expertise capital and hospital innovativeness, especially within the private healthcare sector. The study was conducted in Delta State, Nigeria, located in the South-South geopolitical zone. The population of the study consisted of 1,400 staff drawn from 20 private hospitals distributed across the three senatorial zones of Delta State. These hospitals were selected based on their location and having a staff strength of at least 50, ensuring the inclusion of well-established healthcare facilities with adequate personnel.

The sample size was determined using the Krejcie and Morgan (1970) sample size determination table, which recommended 302 respondents for a population of 1,400. The study adopted the stratified random sampling technique, stratifying hospitals based on their senatorial zones and proportionately selecting staff from each hospital. Data was collected through direct administration of a structured questionnaire divided into sections focusing on demographic information, employee expertise capital, and innovativeness. Items were rated using a 5-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). The instrument was subjected to content and face validation by academic experts and professionals in hospital administration. Reliability was tested using Cronbach's Alpha (α), with all sections yielding coefficients between 0.80 and 0.86, all above the acceptable threshold of 0.70.

Data was analyzed using the Statistical Package for Social Sciences (SPSS) Version 23. Descriptive statistics such as frequency, mean, and percentage were employed, while the hypotheses were tested using the Pearson Product Moment Correlation Coefficient

(PPMCC) at a 0.05 level of significance to determine the nature and strength of the relationship between employee expertise capital and innovativeness. Out of 302 questionnaires administered, 252 copies (83.4%) were correctly completed and found valid for analysis.

RESULTS AND DISCUSSION

Demographic Characteristics of Respondents

The demographic analysis revealed that 56.3% of the respondents are male, while 43.7% are female. The majority of respondents (35.7%) fall within the 31–40 years age group, followed by 41–50 years (27.8%), indicating that the study population is largely composed of young to middle-aged professionals. Most respondents (40.5%) hold a B.Sc/HND degree, followed by MSc/MPhil/MBA holders (19.8%) and MBBS/professional degree holders (11.9%). Nurses/midwives represent the largest professional category (27.8%), followed by administrative/management staff (23.8%) and medical doctors (15.9%). Most respondents (35.7%) have 1–5 years of professional experience, showing that the workforce is largely composed of early to mid-career professionals.

Hypothesis One: Professional Knowledge Competence and Adaptability to Changing Conditions

H_{01}: There is no significant relationship between professional knowledge competence and adaptability to changing conditions of private hospitals in Delta State, Nigeria.

The descriptive statistics showed that a combined 77.8% of respondents strongly agreed or agreed that staff possess up-to-date professional knowledge relevant to their roles (Mean = 3.97, SD = 1.01). Similarly, 76.1% agreed that hospitals adapt quickly to changes in patient volume or case-mix (Mean = 3.91, SD = 1.04). The Pearson correlation analysis revealed a moderate positive relationship ($r = 0.487$, $p < 0.01$) between professional knowledge competence and adaptability to changing conditions. This indicates that hospitals with higher levels of professional knowledge competence among staff tend to adapt more effectively to changing operational and environmental conditions. Consequently, the null hypothesis (H_{01}) is rejected.

These results are consistent with findings from Okoye and Obi (2023), who observed that clinical expertise among emergency department staff significantly reduces diagnostic errors and improves decision-making under pressure. Similarly, Essien and Udoh (2020) found that accumulated expertise in neonatal intensive care units correlated negatively with infant mortality, demonstrating that knowledge competence enhances practical adaptability in high-stakes clinical environments. Furthermore, Yakubu and Lawal (2021) found that participation in structured continuing medical education (CME) programs improves adherence to patient safety protocols and reduces adverse events. The current study aligns with this view, suggesting that continual updating of professional knowledge equips hospital staff with the cognitive and procedural tools required to navigate emerging challenges.

Table 1: Pearson Correlation between Professional Knowledge Competence and Adaptability to Changing Conditions

Variables	Prof. Knowledge Competence	Adaptability to Changing Conditions
Prof. Knowledge Competence	1	
Adaptability to Changing Conditions	.487**	1

Sig. (2-tailed)	.000	
N	252	252

***Correlation is significant at the 0.01 level (2-tailed). Source: SPSS Version 23 (2026)*

Hypothesis Two: Specialized Skills and Strategic Learning Programs/Capabilities

H_{02}: There is no significant relationship between specialized skills and strategic learning programs or capabilities of private hospitals in Delta State, Nigeria.

The descriptive statistics revealed that a combined 81.4% of respondents strongly agreed or agreed that staff possess specialized technical skills required for quality service delivery (Mean = 4.01, SD = 0.98), indicating the highest level of consensus among all items measured. Similarly, 77.3% agreed that hospitals have structured organizational learning programs (Mean = 3.94, SD = 1.03). The result reveals a Pearson correlation coefficient of 0.531 ($p < 0.01$), indicating a strong positive relationship between specialized skills and strategic learning programs or capabilities in private hospitals. This finding implies that hospitals with highly specialized staff are more likely to invest in structured learning systems, knowledge sharing, and long-term capability development. Therefore, the null hypothesis (H_{02}) is rejected.

Nwankwo and Adeyemi (2022) reported that surgical teams with high levels of specialty expertise exhibited better coordination and reduced post-operative complications. This supports the current finding that expertise strengthens organizational capabilities for learning and innovation. In the same vein, Amadi and Chidiebere (2023) emphasized the role of interdisciplinary expertise sharing in reducing medication errors, highlighting that specialized skills enhance both team functioning and institutional knowledge capital. Additionally, Bello and Hassan (2023) found that infection control certifications among staff significantly reduced hospital-acquired infections by 40%, demonstrating that targeted skill specialization translates into measurable improvements in service quality.

Table 2: Pearson Correlation between Specialized Skills and Strategic Learning Programs/Capabilities

Variables	Specialized Skills	Strategic Learning Programs
Specialized Skills	1	
Strategic Learning Programs	.531**	1
Sig. (2-tailed)	.000	
N	252	252

***Correlation is significant at the 0.01 level (2-tailed). Source: SPSS Version 23 (2026)*

Hypothesis Three: Focused Training Programs and New Solution Processes

H_{03}: There is no significant relationship between focused training programs and new solution processes of private hospitals in Delta State, Nigeria.

The Pearson correlation coefficient of 0.564 ($p < 0.01$) indicates the strongest positive relationship among all tested hypotheses, signifying that focused training programs share a strong positive association with the introduction of new solution processes in private hospitals. This finding implies that hospitals that implement targeted in-service training, address identified skill gaps, and encourage participation in external workshops are more likely to adopt innovative clinical procedures and improve

service delivery processes. Focused training ensures that staff can translate learned knowledge into actionable improvements, thereby enhancing operational efficiency. Based on this result, the null hypothesis (H_{03}) is rejected.

Emecheta and Okafor (2021) highlighted that simulation-based training for midwives in Enugu State significantly improved maternal and neonatal care outcomes, showing that hands-on learning directly contributes to the practical application of skills. Similarly, Yakubu and Lawal (2021) emphasized that continuous CME participation enhances adherence to safety protocols, which reinforces the idea that structured, goal-oriented training supports innovation in healthcare settings. The current study confirms that focused training programs in Delta State private hospitals facilitate the introduction of new solution processes, improving overall adaptability and service quality. Furthermore, Amadi and Chidiebere (2023) observed that multidisciplinary teams with strong expertise performed tasks with fewer errors and higher efficiency, reinforcing the link between training and innovation.

Table 3: Pearson Correlation between Focused Training Programs and New Solution Processes

Variables	Focused Training Programs	New Solution Processes
Focused Training Programs	1	
New Solution Processes	.564**	1
Sig. (2-tailed)	.000	
N	252	252

***Correlation is significant at the 0.01 level (2-tailed). Source: SPSS Version 23 (2026)*

Hypothesis Four: Problem-Solving Abilities and Adaptability to Changing Conditions

H_{04}: There is no significant relationship between problem-solving abilities and adaptability to changing conditions of private hospitals in Delta State, Nigeria.

The descriptive statistics indicated that 80.2% of respondents agreed or strongly agreed that staff can identify and solve clinical problems effectively without unnecessary escalation (Mean = 3.97, SD = 1.01), while 79.3% agreed that multidisciplinary teams work collaboratively to resolve patient care challenges (Mean = 3.96, SD = 1.00). The Pearson correlation shows a strong positive relationship ($r = 0.506$, $p < 0.01$) between problem-solving abilities and adaptability to changing conditions. Staff who demonstrate initiative in identifying and resolving clinical problems, collaborate effectively in multidisciplinary teams, and adapt treatment plans creatively are better able to respond to sudden changes in patient volume, technological updates, and regulatory shifts. Accordingly, the null hypothesis (H_{04}) is rejected.

Amadi and Chidiebere (2023) noted that interdisciplinary teams with high levels of coordination and expertise exhibited fewer medication errors, supporting the idea that problem-solving competencies strengthen adaptability and minimize risks in complex care environments. Similarly, Okoye and Obi (2023) and Essien and Udoh (2020) demonstrated that clinical staff with extensive experience and expertise are more capable of navigating unpredictable scenarios, which reduces errors and improves patient outcomes. Moreover, Nwankwo and Adeyemi (2022) emphasized the importance of team familiarity and problem-solving in

surgical success, showing that collective troubleshooting abilities enhance overall hospital performance.

Table 4: Pearson Correlation between Problem-Solving Abilities and Adaptability to Changing Conditions

Variables	Problem-Solving Abilities	Adaptability to Changing Conditions
Problem-Solving Abilities	1	
Adaptability to Changing Conditions	.506**	1
Sig. (2-tailed)	.000	
N	252	252

***Correlation is significant at the 0.01 level (2-tailed). Source: SPSS Version 23 (2026)*

Summary of Findings

This study examined the relationships between professional knowledge competence, specialized skills, focused training programs, problem-solving abilities, and organizational outcomes specifically adaptability to changing conditions, strategic learning programs, and new solution processes in private hospitals in Delta State, Nigeria. A sample of 252 staff members was surveyed, and Pearson's Product Moment Correlation was used to test the hypotheses. The key findings are as follows:

i. There is a moderate positive and significant relationship between professional knowledge competence and adaptability to changing conditions ($r = 0.487$, $p < 0.01$).
ii. There is a strong positive and significant relationship between specialized skills and strategic learning programs or capabilities ($r = 0.531$, $p < 0.01$).
iii. There is a strong positive and significant relationship between focused training programs and new solution processes ($r = 0.564$, $p < 0.01$).
iv. There is a strong positive and significant relationship between problem-solving abilities and adaptability to changing conditions ($r = 0.506$, $p < 0.01$).

CONCLUSION

The study concludes that professional knowledge, specialized skills, focused training, and problem-solving abilities significantly contribute to the adaptability, learning capacity, and innovative capabilities of private hospitals in Delta State. Hospitals that invest in developing these competencies among their staff are better equipped to respond to operational challenges, implement strategic learning programs, and introduce new solutions that improve patient care and organizational efficiency. Specifically, professional knowledge competence enhances staff readiness to implement changes based on emerging evidence and updated protocols. Specialized skills strengthen organizational learning, enabling hospitals to share expertise and plan for future capacity. Focused training programs ensure that employees can translate newly acquired knowledge into practical improvements, while problem-solving abilities facilitate rapid adaptation to dynamic conditions.

The study underscores the importance of a multi-dimensional approach to staff development. Hospitals that prioritize both individual expertise and collective capability-building are more likely to sustain high performance and improve patient outcomes. The findings reinforce Human Capital Theory and Resource-Based View (RBV) of the Firm by demonstrating that knowledge,

skills, and problem-solving capabilities constitute valuable organizational resources that enhance adaptability, learning, and innovation in private hospitals, thereby contributing to sustainable competitive advantage. Based on the study findings, the following recommendations are made:

1. Private hospitals should prioritize continuous professional development programs to ensure staff remains competent and adaptable to changes in medical protocols and patient care requirements.
2. Management should recruit and retain personnel with specialized skills in niche clinical areas, while encouraging knowledge sharing across departments to enhance strategic learning capabilities.
3. Hospitals should implement focused training programs that address identified skill gaps, incorporate simulation or practical workshops, and include follow-up mechanisms to ensure new skills are applied in practice.
4. Problem-solving and critical thinking should be cultivated through interdisciplinary team exercises, clinical scenario simulations, and mentorship programs to strengthen adaptability to changing operational conditions.

Contribution to Knowledge

This study contributes to knowledge in the following ways. Empirically, unlike previous research that focused largely on patient outcomes or isolated training interventions, this study demonstrates the combined influence of professional knowledge, specialized skills, focused training, and problem-solving abilities on adaptability, learning, and innovation in private hospitals in Delta State. Geographically, while prior studies were conducted in Anambra, Abuja, Lagos, and other regions of Nigeria, this research provides region-specific evidence for Delta State, highlighting the unique organizational dynamics of private hospitals in the area.

Theoretically, the study reinforces Human Capital Theory and Resource-Based View by showing that knowledge, skills, and problem-solving capabilities are critical resources that enhance hospital adaptability, learning capacity, and innovative processes, adding a nuanced understanding of how human capital drives operational excellence in healthcare organizations.

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