

Knowledge Creativity and The Sustainability of Public Hospitals In South-South Nigeria: A Regression Analysis

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Abstract

The specific objective of the study was to ascertain the extent to which knowledge creativity influences the sustainability of public hospitals in South-South Nigeria. The study employed a correlation design. A sample of 596 respondents was selected from twelve categorized public hospitals in South-South, Nigeria. Thirty-four questions were formulated in the questionnaire in line with the stated objective of the study. A total of 596 copies of the questionnaire were administered, and 551 copies were collected, showing 92 per cent responses, ten responses were rejected, and 541 documents constituting 90 per cent of the questionnaire were analyzed. The results showed a significant positive relationship between knowledge creation and sustainability of public hospitals in South-South Nigeria. The study concluded that knowledge creativity is a tool to facilitate healthcare organizational performance and productivity towards quality service delivery. The study, therefore, recommends that the administrators in healthcare organizations should be mindful that adoption of knowledge management practices would be dependent on leadership, information technology, infrastructure, organizational behaviour and supporting policies of human resource management.

Keywords: Knowledge, creativity, sustainability, public hospitals.

Received: 13 June 2021

Revised: 19 September 2021

Accepted: 27 October 2021

1. Introduction

In today's knowledge-based economy, health care organizations and other businesses operate in a dynamic and complex environment. Therefore, knowledge management implementation is becoming an essential source of sustainable innovation and organizational performance. As a result, knowledge-intensive organizations like health care organizations or institutions consider knowledge management implementation a vital success tool to have a competitive advantage over others in the same health sector (Ada, Akan, Angioha & Enamhe, 2021). Although a health system consists of all organizations, people and actions whose primary aim is to promote, restore or maintain health according to the World Health Organization Policy, health care organizations such as hospitals and academic health centres (university-affiliated teaching hospitals) form a significant component of a healthcare system, regardless of the country, state, or funding arrangements (Ada & Akan, 2019).

Health care organizations comprise professionals from different disciplines forming several interconnected care teams that strive to provide safe and consistent care. The health care teams have to coordinate, harmonize, and communicate among their members and other groups to function cohesively to implement the highly coordinated and high-risk activity called patient care. Health care organizations have to be able to modify their actions based on sudden changes due to public health disasters such as Pandemics (World Health Organization, 2014; Ada, 2014; Ingwe, 2017; Angioha, Omang, Ishie, & Iji, 2020; Akpabio, U. P., Angioha, Egwuonwu, Awusa, & Ndiyo, 2020), without compromising patient safety or quality of care and this will be achieved or attained through knowledge creation, knowledge transfer,

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knowledge integration, the application of knowledge management skills as well as effective usage of organizational knowledge to enhance hospital sustainability, workers' productivity, service delivery, innovation and patients' satisfaction. Health care organizations develop knowledge management capabilities to help support a range of vital operational and innovative activities. The interest in organizational capabilities has focused on the development processes and infrastructure required to support daily work practices.

While the emphasis is shifting from local or traditional medicine to orthodox medicine, knowledge management is a navigator to achieve quality healthcare delivery amidst many healthcare problems. Governments and other health donor agencies strive hard to achieve health goals through a public-private partnership to ensure quality healthcare delivery (Wiig, 1995). However, there is still a high level of unawareness of the importance of knowledge creation, sharing, transfer, integration, acquisition and usage to enhance the sustainability of hospitals, workers' productivity, service delivery, health care innovation and patients' satisfaction in hospitals and the hazardous and competitive environment.

However, many health care organizations in Nigeria face a lack of knowledge. This is because they lack processes for knowledge management. Health care organizations lack the necessary procedures in creating or acquiring knowledge due to their rapid growth to meet health challenges. They fail to meet the required ingredients of knowledge capabilities in their professional activities, which variably affect their efficiency and quality of treatment. The lack of awareness of the need for healthcare organizations to be creative and adapt to new healthcare changes has led many healthcare organizations (hospitals) to lose their patients to their counterparts overseas, where creativity is part of the hospitals' policies and programmes. This problem has made it impossible for hospitals to survive and compete with other hospitals abroad. This study is to ascertain the extent to which knowledge creativity influences the sustainability of public hospitals in South-South Nigeria.

2. Theoretical framework

The study is anchored on the social learning theory propounded by Albert Bandura (1977) and modified in 2001. He mapped out a perspective and perception of learning that considers the learner's characteristics, behaviour patterns, and the environment in which they work. The theory progressed by viewing the learner as central (what Bandura called a human agency), suggesting the need to identify what learners are sensing/comprehending and how they interpret and respond to social situations. In this case, emphasis is on the healthcare environment as a social situation.

The theory provides the following assumptions, which include; that individual need not have direct experiences to learn; considerable learning occurs by taking note of other people's behaviour, and learning is always a social process and other individuals, especially significant others, provide compelling examples or role model for how to think, feel and act. The social learning theory extends the learning process beyond the educator-learner relationship to the larger social world. The theory helps explain the socialization process and the breakdown of behaviour in society. The educator or leader is responsible for acting as an exemplary role model and choosing socially healthy experiences for individuals to observe and repeat (requiring the careful evaluation of learning materials for stereotypes, mixed or hidden messages and adverse effects).

Social learning theory has been applied to nursing education to address psychosocial problems and maximize support groups' use in healthcare. Research indicates that those managers who are aware of their roles and responsibilities in promoting a positive work environment enhance learning, competence and satisfaction; dissatisfaction, of course, has a detrimental effect and is a significant cause of staff turnover. Nurses and other medical professionals have applied social learning principles successfully when working with teenage mothers and addressing alcoholism among older adults.

3. Methodology

The study employed a correlation design using analyses. The descriptive survey design entails the description of the phenomenon and characteristics associated with the subject population under study. The population of the study are healthcare employees in a public hospital in South-South, Nigeria. 5 public hospitals were selected for the study, the University of Calabar Teaching Hospital, University of Uyo Teaching Hospital, University of Porth Harcourt Teaching Hospital, Niger Delta University Teaching Hospital and Niger Delta University Teaching Hospital. The sample size for this study is five hundred and ninety-six (596). The sample size was derived from the Five Hospitals in South-South

Nigeria staff. Proportional stratified and purposive sampling technique was applied to select the sample. Each hospital with its own staff population was given the appropriate sample proportionate to its population according to the sample size for the study. The purposive sampling technique was then used to select suitable representative samples from the selected hospitals.

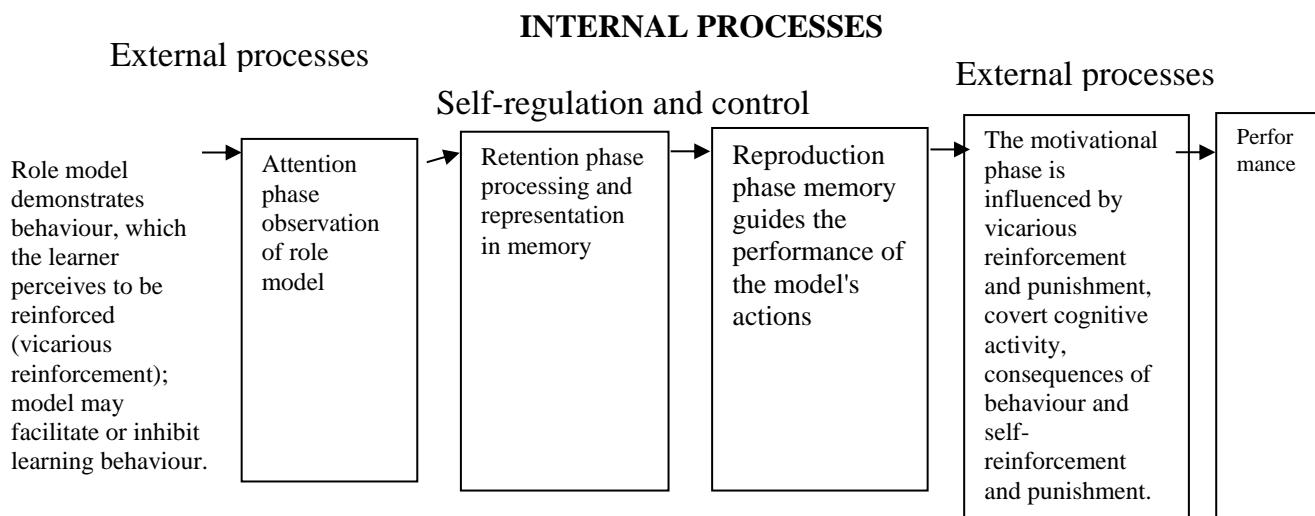


Fig. 1. Social learning theory
Source: Based on Bandura (1977)

The instrument used to collect data was a structured questionnaire designed in a Likert Scale format of five (5) point of “Strongly Agreed (SA)”, “Agreed (A)”, “Undecided”, “Disagreed” and “Strongly Disagreed”. The reliability of the instrument was carried out using Cronbach Alpha Reliability Test. The data gathered from the respondents’ responses were classified and translated into frequency tables. The frequency tables were analysed using percentage distribution. The result from the frequency distribution was subjected to simple linear regression.

4. Analysis of Results and Discussion of Findings

4.1. Analysis of results

This section on results focuses on how data generated from respondents’ responses were analyzed through simple percentages and parametric statistics. The total population of respondents (sample size) for the study was five hundred and ninety-six (596) drawn from the five selected public hospitals in south-south Nigeria. In this regard, five hundred and ninety-six copies of the structured questionnaire were administered on the sample distribution, including the medical and non-medical of the selected public hospitals in south-south Nigeria. The response rate is presented in table 1.

Table 1. Questionnaire response rate

Features of questionnaire	Number	Percentage (%)
Questionnaire administered	596	100
Questionnaire collected	551	92.4
Questionnaire not collected	45	7.5
Questionnaire rejected	10	1.6
Questionnaires used for analysis	541	90.7

From table 1, it shows that 596 questionnaires were administered to the selected respondents public hospitals to tick their preferences; 559 copies of the questionnaire were collected, showing a response rate of 92.4 per cent from the

respondents for the study; 45 copies of the questionnaire were ordered showing 7.5 per cent. This may be because some of the respondents refused to answer them, or probably they misplaced the questionnaire instrument. Meanwhile, ten copies of the questionnaire out of 551 copies of the questionnaire collected were rejected for the study due to different errors discovered. The respondents probably did not answer or cancel the questions in the questionnaire, which shows a poor response rate of 1.6 per cent. Finally, 541 copies of the questionnaire were duly accepted and used for the research analysis. This shows a positive response rate of 90.7 per cent of the respondents. The tables below show the summary of the responses to the personal data of the respondents

4.2. Descriptive Analysis

Here the response of the respondents to the questions as contained in the instrument were analyzed using a graphical illustration.

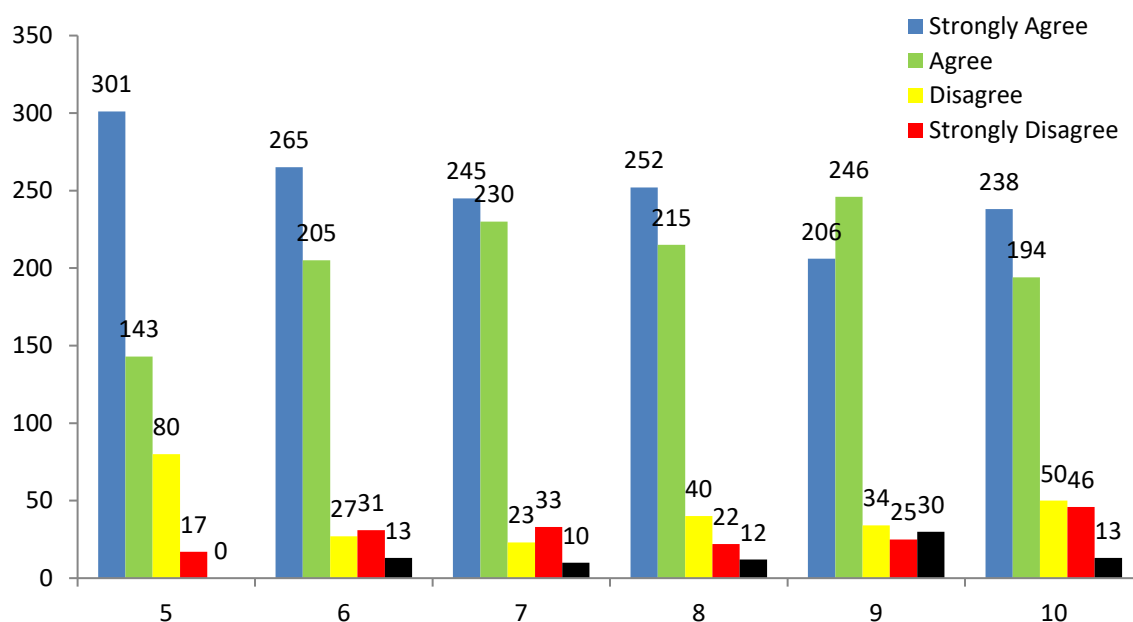


Fig. 2. The relationship between knowledge creativity and hospital sustainability in south-south Nigeria.

The results from the analysis showed that majority of the respondents which is 301 respondents representing 56 percent of the total respondents for the study strongly agreed that the application of new knowledge management skills in healthcare organizations enhance sustainability of public hospitals in south-south Nigeria; 143 respondents representing 26 percent of the total respondents for the study also agreed that the application of new knowledge management skills in healthcare organizations enhance sustainability of public hospitals in south-south Nigeria, 80 respondents representing only 15 percent of the total respondents for the study however disagreed that the application of new knowledge management skills in healthcare organizations enhance sustainability of public hospitals in south-south Nigeria while 17 respondents representing only 3 percent of the total respondents for the study also strongly disagreed that the application of new knowledge management skills in health care organizations enhance sustainability of public hospitals in south-south Nigeria. Although there were no respondents on the undecided option that the application of new knowledge management skills in healthcare organizations enhances sustainability, it can be affirmed from the majority view that the applications of new knowledge management skills in healthcare organizations strengthen the sustainability of public hospitals in south-south Nigeria.

Furthermore, majority view which is 265 responses representing 49 percent of the total respondents for the study strongly agreed that tacit knowledge sharing in health care organizations enhances competitive advantage in public

hospitals in south-south Nigeria; 205 responses representing 38 percent of the total respondents for the study also agreed that tacit knowledge sharing in healthcare organization enhance competitive advantage in public hospitals in south-south Nigeria; 27 responses representing only 5 percent of the total respondents for the study however disagreed that tacit knowledge sharing in healthcare organizations enhance competitive advantage in public hospitals in south-south Nigeria; 31 responses representing 6 percent of the total respondents for the study also strongly disagreed that tacit knowledge sharing in healthcare organizations enhance competitive advantage in public hospitals in south-south Nigeria while 13 responses representing only 2 percent of the total respondents for the study were undecided that tacit knowledge sharing in healthcare organizations enhance competitive advantage in public hospitals in south-south Nigeria. Therefore, it can be affirmed from the majority responses that tacit knowledge sharing in health care organizations enhances competitive advantage in public hospitals in south-south Nigeria.

From the questionnaire analyzed, it is clear that the majority view, which is 245 responses representing 45 per cent of the total respondents for the study, strongly agreed that employees' curiosity for capturing new knowledge in the healthcare sector enhances social responsibility, corporate governance, and explicit ethical principles in public hospitals in south-south Nigeria, 230 responses representing 43 per cent of the total respondents for the study equally agreed that employees curiosity for capturing new knowledge in healthcare sector enhances social responsibility, corporate governance and explicit ethical principles in public hospitals in south-south Nigeria. However, 23 responses representing only 4 per cent of the total respondents for the study, disagreed that employees curiosity for capturing new knowledge in the healthcare sector enhances social responsibility, corporate governance and explicit ethical principles in public hospitals in south-south Nigeria; 33 responses represented 6 per cent of the total respondents for the study also strongly disagreed that employees' curiosity for capturing new knowledge in healthcare sector enhances social responsibility, corporate governance and explicit ethical principles in public hospitals in south-south Nigeria while ten responses representing only 2 per cent of the total respondents for the study were undecided that employees' curiosity for capturing new knowledge in healthcare sector enhances social responsibility, corporate governance and explicit ethical principles in public hospitals in south-south Nigeria. Therefore, it can be affirmed from the majority view that employees' curiosity for capturing new knowledge in the healthcare sector enhances the sustainability of public hospitals in south-south Nigeria.

4.3. Parametric Statistic

The result from the descriptive analysis was subjected to parametric statistics to check the relationship between knowledge creativity and sustainability of public hospitals. The independent variable in this analysis is knowledge creativity, while the dependent variable is the sustainability of public hospitals. Both variables were measured continuously, and inferential statistics involving simple linear regression was used to test the hypothesis at 0.05 Alpha level. The result is presented in Table 2.

Table 2. Summary simple linear regression analysis: knowledge creativity and sustainability of public hospitals

Model	Sum of Squares	df	Mean Square	F	R	R Square	Adjusted R Square	Sig
Regression	1178.869	2	1178.869	44.669	.234 ^a	.055	.053	.000 ^a
Residual	20374.223	539	26.391					
Total	21553.092	541						

- a. Predictors variable: (Constant), **Knowledge Creativity**
- b. Dependent Variable: **Sustainability of Public Hospitals**

As presented by table 2, Results revealed R-value of .234^a, R² = .055, adjusted R² = .053, p = .000^a and < .05 for relationship between knowledge creativity and sustainability of public hospitals. The R-value (Correlation coefficient)

is a standardized measure of an observed degree of relationship between variables. It is a commonly used measure of the size of an effect, and that values of ± 1 represent a small effect, ± 3 is a medium effect, and ± 5 is a large effect.

The R^2 –value of .055 implies that 5.5% of the total variance sustainability of public hospitals is accounted for by predictor variable (knowledge creativity). The regression ANOVA revealed that the $F(2, 772) = 44.669$; $p < .000$, is significant, implying that there is a linear relationship (association) between the predictor variable (knowledge creativity) and the sustainability of public hospitals. The adjusted R^2 (.053) shows some shrinkage of the unadjusted R -value (.055), indicating that the model could be generalized to the population. Based on the results, it was concluded that; knowledge creativity significantly predicts the sustainability of public hospitals.

4.4. Discussion of Findings

From analyzed data, 82 per cent of the respondents reported that it was discovered that 82 per cent reported that the application of new knowledge management skills in healthcare organizations enhance the sustainability of public hospitals in south-south Nigeria. Most of the respondents, 87 per cent, reported that tacit knowledge sharing in health care organizations improves competitive advantage in public hospitals in south-south Nigeria. It was also discovered that employees' curiosity for capturing new knowledge in the healthcare sector enhances social responsibility, corporate governance and explicit ethical principles in public hospitals in south-south Nigeria. This is according to the respondents' response, where 88per cent agreed to this assertion. From the findings, it can be affirmed that knowledge creativity enhances public hospitals' sustainability in south-south Nigeria.

The result from the descriptive analysis was subjected to parametric statistics using linear regression at 0.05 Alpha level. Results revealed R -value of .234a, $R^2 = .055$, adjusted $R^2 = .053$, $p = .000a$ and $< .05$ for relationship between knowledge creativity and sustainability of public hospitals. The R^2 –value of .055 implies that 5.5% of the total variance sustainability of public hospitals is accounted for by predictor variable (knowledge creativity). The regression ANOVA revealed that the $F(2, 772) = 44.669$; $p < .000$, is significant, implying that there is a linear relationship (association) between the predictor variable (knowledge creativity) and the sustainability of public hospitals. We can conclude that knowledge creativity significantly predicts the sustainability of public hospitals. With this analysis, It is viewed that employees' curiosity for capturing new knowledge in the healthcare sector enhances social responsibility, corporate governance and explicit ethical principles in public hospitals in south-south Nigeria. Knowledge management is a valued based management tool for improving organizational performance and productivity, especially in the healthcare sector of the economy. As knowledge-based intensive organizations that continue to face healthcare challenges, healthcare organizations see knowledge management as a tool to facilitate their performance in quality healthcare delivery.

The finding is supported by that of Figurska and Sokol (2020), who found that the creation of proper knowledge conditions is essential for the sustainability of any organization. The study of Ada, Akan, Angioha, and Enamhe (2021) found that ability of the public hospitals to transfer knowledge to other health care units within the health sector will automatically enhance their productivity and performance in health care delivery in Nigeria

5. Conclusion and Recommendations

This research was conducted to empirically test the relationship between knowledge creativity and healthcare sustainability in public hospitals in South-South Nigeria. Knowledge creation or acquisition entails developing new knowledge or replacing existing knowledge with new content, which may come in the form of socialization (the conversion of tacit knowledge to new tacit knowledge through social interactions and shared experiences), combination (creating new explicit knowledge by merging categorizing and synthesizing existing explicit knowledge), externalization (converting tacit knowledge to new explicit knowledge) and internalization (the creation of new tacit knowledge from explicit knowledge). Knowledge acquisition involves the search for, recognition of, and assimilation of potentially valuable knowledge always from outside the organization.

Based on the summary and conclusions drawn from the study results, it was recommended that; administrators in healthcare organizations be mindful that adoption of knowledge practices would be dependent on leadership,

information technology infrastructure, and supporting policies in human resource management. As medical personnel within healthcare delivery, organizations usually gain experience through a mentor-apprentice route. An organizational culture that promotes and rewards such behaviour would be beneficial. However, care should be taken not to excessively formalize social learning practices, which may disrupt knowledge sharing between medical personnel. Healthcare organizations should ensure a high level of implementation of a knowledge management system or a new strategic focus on knowledge sharing through influencing health principal officers and personnel to adopt new attitudes and behaviours related to knowledge sharing and a change management strategy. This strategy will create a need to change the status quo and involve activities mapped to ensure that employees (medical personnel) are satisfied with the change process.

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