Factors Affecting Hospital Service Innovation; Literature Review

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Abstract

Innovation at the hospital as a change in the delivery of patient-focused health services by encouraging healthcare professionals to work smarter, faster and better. Service innovation can provide an effective way to create a sustainable competitive advantage for hospitals. This study aims to analyze and examine the factors that influence service innovation in hospitals using the literature review method. The results were obtained from a literature search that discusses the major factors that influence service innovation, namely in the form of a good management system within the scope of the hospital. This big influence is that human resources, starting from the leaders and employees who work in the hospital, must work together for the advancement and empowerment of the hospital.

Keywords: Influence Factors, Service Innovation, Hospital

Introduction

Hospital is a health service institution that plays a role in providing complete individual health services. The role of the hospital, which is quite comprehensive, describes an organization that is very complex, capital intensive, technology intensive, labor intensive, professional and system intensive. In addition, the uniqueness of hospital services is influenced by the values held by patients. The Institute of Medicine (IOM) explained that the quality of health service institutions is aimed at providing safe, effective, patient-centered, timely, efficient, and equitable services, one of which is Patient Centered Care (PCC).

The PCC concept is an innovative approach to health care planning, service and evaluation based on mutually beneficial partnerships between health care providers, patients and families. PCC as a care-friendly and responsive to individual patient choices, needs, and values, and ensures patients make clinical decisions (Medicine, 2001). This concept is to provide services to patients by referring and respecting individuals including preferences / choices, needs, values, which aims to create patient satisfaction, improve the quality of clinical results, reduce excessive and useless medical services, reduce the possibility of malpractice and complaints, and reduce health costs.

In facing free market competition, hospitals must be able to survive and need to formulate appropriate marketing strategies, by carrying out various innovations according to community needs. With the change in the paradigm of hospitals entering free market competition, regulatory developments, people's need for health services is increasing, responding to millennial society, technological developments in the health sector, so hospitals need to make innovations.

Innovation in the hospital is defined as a change in the delivery of patient-focused healthcare by encouraging healthcare professionals to work smarter, faster and better. Pervaiz K. Ahmed and Charles D. Shepherd (2010) argued that organizational innovation can produce R&D (Research and Development), production and marketing approaches. Innovation is creating or adopting new ideas, products, services, programs, technology, policies, structures or new administrative systems.

Service innovation is to provide new services to customers. In line with this definition, service innovation is creating a new service or significantly improving an existing service. Service innovation can provide an effective way to create a sustainable competitive advantage for a company.

Innovation is a widely studied field. This is critical for any organization looking to achieve and maintain a competitive advantage in the marketplace, although assessing the impact of innovation is a challenge due to the difficulty of isolating and measuring it. In addition, health institutions in the face of improvement need innovation in order to compete and offer new treatments to patients. Curiously, little is known about innovation in health care organizations and their relationship to performance.

Service innovation "has become a term that refers to innovation that occurs in a variety of service contexts, including the introduction of new services or the incremental improvement of existing services. In recent decades, healthcare innovation has increased with product, care and care delivery technologies. improve patient life expectancy and quality of life, and make access to services and pathways of care easier Innovations in health care result in efficiencies, reduced costs and human error.

However, making service innovations is not an easy thing so that in the process there are several things that can influence a service innovation to succeed or not, especially in the health sector in hospitals. For this reason, the authors are interested in examining some of the literature regarding what factors can influence service innovation in hospitals.

Methods

This study uses a narrative literature review model which aims to review and study several literature on the same topic. Determining the title in the literature review, namely the factors that influence service innovation in hospitals by proposing a narrative literature review. Then determine the review questions, namely what factors influence service innovation in the hospital. Then compile inclusion criteria that depend on the review questions asked. Inclusion criteria include population, concept and context. The inclusion criteria in this literature review are 1) Population: hospital. 2) Concept: hospital innovation, service innovation. 3) Context: factors that influence service innovation in hospitals. 4) Literature entered; with quantitative, qualitative, and review designs, published for the last 5 years starting January 1, 2015, in English. 5) Literature will be excluded if the concepts discussed are not published in a peer-reviewed journal. This study uses a search strategy that aims to find literature that has the potential to be selected according to the objectives of the review. Search The search strategy in the literature review is divided into 3 stages.

Initial searches were made of at least two online databases relevant to the topic via Google Scholar, Science Direct, PubMed, ProQuest. The search was carried out on this source and took published data starting from January 1, 2015.

Figure 1. Initial search algorithm

Using identified keywords which are searched on online databases. The keywords used are; 1) Population: Hospital. 2) Concept: Hospital innovation, service innovation. 3) Context: Innovation factor OR factor influence OR Hospital OR

Tracing a list of references from identified literature that may be included as additional sources. In analyzing, the authors classified papers describing what factors influence service innovation in hospitals

Results and Discussion

Based on the selection results from several article sources based on keywords, Google Scholar totaled 17,400, Science Direct totaled 22,165, Pubmed totaled 10,943 and Proquest totaled 112,475. Then from the initial total search, then filtered based on the year of publication starting from the last 5 years the total number of articles obtained was 6,514. then the article was reselected and issued based on the title and abstract and the duplication that was not suitable so that it became 60 articles. From the 60 articles, they were excluded based on the inclusion criteria into 27 articles. The steps in data extraction can be seen in Figure 2.

Figure 2. Mapping the Initial Search Process

Table 1. Literature published and analyzed

No	Author's Name, Title, Journal	Year of Publication	State	Purpose	Methods	Similarity
1	Maren Batalden et al, <i>Coproduction of healthcare service</i> . BMJ Qual Saf 2016;25:509–517	2017	USA	To explore production principles that have implications and challenges for the development of health professionals, for design service delivery systems and for understanding and measuring benefits in healthcare	<i>Conceptual Framework</i>	This research looks at new productions and new innovations in health care and their impact on health care
2.	Durst, S., et al. <i>Service innovation and its impact: What do we know about?</i> Elsevier	2015	Europe	To look at "service innovation" and its impact on performance	<i>Systematic Literature Review</i>	This study shows that there is knowledge of a relationship between service innovation and performance, so that performance becomes a factor for service innovation
3.	Craig Kuziemy, <i>Decision-making in healthcare as a complex, adaptive system, Healthcare Management Forum</i> , Vol. 29(1) 4-7	2016	Canada	To review the challenges of using traditional decision-making approaches in health care and how the insights from Complex Adaptive Systems (CAS) can support health care management.	<i>Conceptual Framework</i>	Complex Adaptive System which is an innovation in health services
4.	Roberts JP,et al, <i>A design thinking framework for healthcare management and innovation</i> . Healthcare , Elsevier	2016	US	To see how design thinking applies to health care challenges and how systems can capitalize on this and see evidence in the problem-solving process in health care.	<i>Conceptual Framework</i>	A design concept that is an innovation in health services

5.	Seyed Samad Hossein. Et al. <i>The Impact of Knowledge Management Strategy on Service Innovation Performance in Private and Public Hospitals , Iranian Journal of Management Studies (IJMS) Vol. 12, No. 1, Winter 2019 Print ISSN: 2008-7055 pp. 1-24</i>	2019	Iran	To investigate the comparative effect of knowledge management strategies on service innovation performance in public and private hospitals through the mediating role of knowledge management practices.	<i>Literature Review</i>	Knowledge Management Strategy affects service innovation in hospitals.
6.	Hamideh Ravand et al, <i>Relationship between Transformational Leadership and Process and Service Innovation in a Teaching Hospital of Tehran University of Medical Sciences, Iranian Journal of Nursing Research (IJNR), July-August 2017, Volume 12, Issue 3</i>	2017	Iran	To investigate the relationship between transformational leadership and process and service innovation in teaching hospitals	<i>Survey</i>	Transformational leadership is one of the factors in service innovation in hospitals
7	Laudio Guarcello, <i>Service Innovation in Healthcare: A Systematic Literature Review, Latin American Business Review</i>	2020	USA	To summarize and analyze evidence on how innovative services are in health care	<i>Systematic Review</i>	Summarize and analyze the literature on service innovation factors in health care
8.	Leonard L. Berry et al <i>Service innovation is urgent in healthcare</i>	2019	USA	To explain the importance of service innovation in health care	<i>Conseptual Framework</i>	Service innovation is important by looking at the factors that determine

	AMS Review (2019) 9:78–92					the importance of service innovation
9	Amanda Fox, et al <i>A theoretical framework to support research of health service innovation</i> <i>Australian Health Review</i> , 2015, 39, 70–75	2015	Australia	To provide a thorough examination of research findings and provide a suitable theoretical framework for testing the sustainability of healthcare innovation.	<i>Integrative Literature Review</i>	Theory of service innovation in the world of health
10.	Vatcharapong Sukkird et al, <i>Technology challenges to healthcare service innovation in aging Asia: Case of value co-creation in emergency medical support system</i> , <i>Elsevier Technology in Society xxx (2015) 1e7</i>	2015	Thailand	To identify the technological challenges facing health care in terms of a medical service system created to support the demands of elderly patients.	<i>Systematic Literature review</i>	Technological challenges are service innovations in the medical world or in hospitals
11.	Peter Samuelsson,, et al, <i>Incremental and Radical Service Innovation in Healthcare, Handbook of Service Science, Volume II, Service Science: Research and Innovations in the Service Economy</i> ,	2018	Sweden	To conceptualize incremental and radical service innovations based on internal and external changes and identify four types of service innovation and explore the effects and processes of service innovation diffusion.	<i>Literature review</i>	Service innovation in the hospital department
12.	Maria R. A. Moreira, <i>Does innovation influence the performance of healthcare organizations?</i> <i>Innovation</i>	2017	Portugal	To analyze whether some types of innovation affect relevant performance measures in health institutions	<i>Conceptual Framework</i>	The performance of employees in health institutions or hospitals has an effect on service innovation in hospitals

	<i>Organization & Management</i> ISSN: 1447-9338 (Print) 2204-0226					
13.	Anne Cleven et al, <i>Healthcare quality innovation and performance through process orientation: Evidence from general hospitals in Switzerland</i> Elsevier, <i>Technological Forecasting & Social Change</i>	2016	Switzerl and	To describe the quality of the health service innovation, its performance and process orientation	<i>Conseptual Framework</i>	Seeing the relationship between service innovations with performance and the process of acceptance in health services
14	Ko, Yu Kyung ¹ et al <i>Organizational Culture and Organizational Support as Factors Affecting the Innovative Behaviors of General Hospital Nurses</i> Korean Acad Nurs Adm(간호행정학회/지) Vol. 21 No. 2, 223-231, March 2015	2015	Korea	To identify the effects of organizational culture, and organizational support on innovation in hospitals	<i>Survey</i>	The relationship between organizational culture and organizational support is one of the driving factors for service innovation in hospitals
15.	Yu Mu,et al <i>Employee involvement in ideation and healthcare service innovation quality</i> The Service Industries Journal	2017	Jerman	To examine the influence of employee and top management involvement in the ideation process on the quality of health service innovation	<i>Literature Review</i>	Involvement between employees and top management is a factor in influencing service innovation in the hospital

16.	Ole Hanseth1et al <i>Flexible generification: ICT standardization strategies and service innovation in health care European Journal of Information Systems (2015) 24, 645–663</i>	2015	Norwegi a	Identify links between standardized strategies and service innovation in the health sector	<i>Case Study</i>	The standardized strategy is a factor influencing service innovation in hospitals
17	Anton Klarin, <i>Mapping product and service innovation: A bibliometric analysis and a Typology, Elsevier Technological Forecasting & Social Change 149 (2019) 119776</i>	2019	Australi a	To see and review some literature about how product innovation and service innovation	<i>Systematic literature Review</i>	Discusses service innovation in general and reviews some reliable literature
18	Ian Vickers, <i>Public service innovation and multiple institutional logics: The case of hybrid social enterprise providers of health and wellbeing, Elsevier Research Policy</i>	2017	London	To see how service innovations are in the public sector and their relationship with health service providers	<i>Case Study</i>	Service innovations in the world of health have many implications for health care providers such as hospitals
19	Thune & Mina, <i>Hospitals as innovators in the health-care system: A literature review and research agenda, Elsevier, Research Policy</i>	2016	Norwegi a	To increase understanding of the role of the hospital in the innovation generation	<i>Literature Review</i>	The role of the hospital is one of the factors in developing service innovations in the hospital itself
20	Jenny Karlson et al	2016	Norwegi	To study the contribution of	<i>Case Study</i>	The role and

	<i>Exploring front-line employee contributions to service innovation</i> <i>European Journal of Marketing</i>		a	employees on this front in service innovation, when and how they contribute to be involved in it		involvement of employees is one of the influencing factors in service innovation in the hospital
21	Christoph Rasche, et al <i>Service Model Innovation in Hospitals: Beyond Expert Organizations</i>	2016	German	To find out why the organization should define services from a patient perspective and why the organization should focus on patient and patient safety issues	<i>Conceptual Framework</i>	Looking at the model of service innovation in hospitals and the influence of the hospital's role on patient safety
22	Qiang Wang, et al <i>Modes of service innovation: a typology</i> IMDS	2015	China	To explore the differences between the forms of service innovation by examining the business innovation model with two models, namely process innovation and service innovation	<i>Literature Review</i>	See how service innovation and its impact and impact on the health sector
23	Dr. Mohammed Sultan Majied Mahasneh, et al <i>Innovation in Health Services alignment with the Competitive Advantage Achievement in Private Hospitals in Saudi Arabia: Strategic Evidence ,</i> <i>International Journal of Business and Social Science Vol. 11 • No. 3 • March 2020</i>	2020	Saudi Arabia	To examine the level of innovation dimensions in health care (products and processes) that correspond to the competitive advantage of health care	<i>Literature Review</i>	The existence of a level in service innovation is a factor in the innovation itself in the world of health
24	Jamie Newman et al, <i>Inpatient Beds for</i>	2019	US	To see and conduct a survey of hospital innovations in the form of	<i>Survey</i>	The procurement of fabrication for inpatient

	<i>Patients With Syphilis Hospital Innovation 1919, JAMA</i>			providing inpatient beds for patients		beds is an innovation in home services
25	Seong No Yoon, et al <i>Effects of innovation leadership and supply chain innovation on supply chain efficiency: Focusing on hospital size,</i> <i>Elsevier Technological Forecasting & Social Change xxx</i>	2016	Korea	To examine the effects of innovation leadership and Supply Chain (SC) innovation on SC efficiency in healthcare organizations	<i>Literature Review</i>	The existence of an innovation leadership style is one of the factors that influence service innovation in hospitals
26	Mi-sook Yeum et al, <i>The Effect of Internal Marketing on Competitive Advantage as Organizational Coaching - Mediating Effect of Service Innovation</i> <i>International Journal of Business Policy and Strategy Management Vol.6, No.1 (2019), pp.7-12</i>	2019	Korea	To examine the effect of internal marketing or internal marketing on competitive advantage by means of funding the organization to obtain that competitive advantage.	<i>Literature Review</i>	Internal marketing is one of the factors that influence the achievement of service innovation in hospitals.
27	Md Anwarul Islam, et al <i>Effect of knowledge management on service innovation in academic libraries</i>	2017	USA	To investigate the effect of knowledge management on service innovation in academic libraries	<i>Literature Review</i>	Knowledge management also influences service innovation in the health sector in hospitals

Source: Primary Data, 2020

Figure 3. Number of Years of Published Articles

Overall, the total number of articles analyzed were 27 articles that met the inclusion and exclusion criteria can be seen in table 1. Based on the results of the analysis of the papers, the number of literature analyzes fluctuated in terms of the year of publication. Whereas in Figure 3, it can be seen that most of the published articles come from two countries, namely the UK and the US.

Figure 4. Number of Articles by Country

To better understand the rarity of this paper, the authors classify the papers based on the type of research can be seen in figure 4.

Figure 5. Number of Articles by Type of Research

In diagram 3, it illustrates the number of articles based on the type of research, where most of the article research methods analyzed used the literature review method, which was 48%. Then the conceptual framework literary method was 33%, the Case Study method was 11% and the Survey method was 8%.

Influence Factors of Service Innovation in Hospitals

Literature Review

In this section, the authors present the findings of analysis of several literature based on the topics raised, namely the factors that influence service innovation in hospitals. With the rapidly changing competitive environment, organizations including hospitals have concerns about how to increase their competitive advantage. One solution to this problem is internal marketing (IM) which affects employee attitudes and changes the service process with new ideas, which in turn leads to competitive advantage. This is in line with Yeum's (2019) research, which uses three elements of internal marketing: communication, empowerment, and appreciation. IM has a positive effect on service innovation. To get a competitive advantage in an organization comes from how to manage and build communication, education & training, appreciation, empowerment.

Whereas in Hosseini's (2019) paper which aims to study the influence of knowledge management strategies on practice to achieve better service innovation performance in the health sector. In recent theoretical developments, knowledge management activities have a key role in improving innovation performance (Moosavi Jad et al (2017) in Yeum, 2019). Therefore, the achievement of innovation is highly dependent on the knowledge, skills and commitment of employees as key factors in the value creation process. Knowledge management strategies result in more efficient use of human resources, detection of deficiencies in organizational knowledge, more effective and efficient employee learning, provision of goods and services with more added value, customer and employee content, prevention of error repetition, duplication and time economy.⁷.

In general, Hosseini's research shows that this knowledge management practice is linked to innovative excellence. The reason is that the combination of existing and newly acquired knowledge can play an indisputable and extraordinary role in service innovation. In addition, organizations to implement effective knowledge management practices must implement appropriate strategies. They also have to share knowledge with employees. With the management of intellectual resources and new ideas presented by employees, the hospital is able to provide innovative ideas, tools and services, and processes for their therapy section. Overall, there is sufficient support for knowledge management practices based on knowledge management strategies in relation to developing innovations in new services in order to provide better services to patients in hospital services. In addition, according to Roberts (2016), with a design mindset in health service management, a renewal in the world of health also has a big effect.

One of the reasons behind an underdeveloped understanding of service innovation may still be assigned to the predominance of industrial and technological approaches to innovation. If the organization wants to adopt a service-based strategy, it is important to be able to measure the value of this type of innovation, that is, its impact on company performance. thus, disrupting the optimal allocation of their fear resources.

Innovation has been widely recognized as the key to organizational success and leadership style is one of the most important dynamic factors in organizational progress or stagnation. Transformational leadership by creating change in the organization can stimulate staff innovation. The results showed a positive and significant relationship between transformational leadership and process and service innovation. In addition, there is a positive and significant relationship between all components of transformational leadership (idealized influence, intellectual stimulation, individual judgment and inspirational motivation) and process and service innovation. The success of service organizations is directly related to employees and how they behave. By creating commitment and responsibility to employees, it causes the organization to grow and survive. The role of transformational leadership encourages employees to think creatively and innovatively.

The increasing demand for health services demands innovation. According to Fox (2015), there are several factors that influence the sustainability of an innovation in the world of health.

Political factors

Politics that focus on one particular policy will greatly affect the sustainability of an innovation and political sustainability is considered to increase when management leaders and organizational culture support innovation. Therefore, the role of the leadership element and the involvement of staff are the main focus of the political segment.

Organizational factors

Flexibility and adaptation of innovation to suit the context and organization have been recognized as proponents of sustainability innovation. Operational governance agreed upon in an organization and effective communication within an organization will increase the sustainability of innovation. Lack of meetings and teamwork leads to a lack of support for innovation and poor sustainability.

Financial Factors

Innovations that have a dedicated, sustainable budget and are sufficient to meet a need are more likely to be used by an organization. The financial factors of this theoretical framework ensure funding sources, planning strategies and evaluation of innovations.

Labor factor

The workforce or staff and their roles will change according to the minimum amount of training attended. Using high quality training resources will also support the sustainability of an innovation. Lack of continuity or not having adequate staff to implement innovations is a threat to sustainability.

Innovation-specific factors

The nature and type of innovation will play a role in the sustainability of the innovation itself. An important feature of an innovation is fluidity and adaptability to respond to changing funding and service requirements based on local decision making and needs. Consequently, innovation-specific factors focus on identifying supports and barriers to innovation strategies and evaluating self-innovation.

These factors are a dynamic collection of characteristics and may be related to one another. As a direct consequence, innovation services are emerging as a research priority to better understand

how health care providers can improve health care and promote services by combining and recombining innovative and renewable resources. According to Berry, 2019, one of the factors that influence the success of a service innovation in the hospital is the presence of a strong expertise in marketing a service. Health care needs to learn how to improve marketability so that services can be utilized and utilized optimally.

In the literature Thune (2016) devotes special attention to the role of medical doctors and looks in detail at the role of physicians as inventors, their role in developing new products, and the ways in which these activities are carried out in collaboration with industry. The literature on hospitals as innovative organizations is, as one might expect, primarily internally oriented to hospitals. Some of this literature also has a special focus on use and dissemination, particularly on questions about complementary service innovations, adaptations, and post-implementation improvements. This literature has a learning perspective in organizations and tends to emphasize organizational features and management practices that promote openness and participation in innovation activities among hospital employees.

Conclusion

From some of the literature analyzed, 27 journals were in accordance with the topics and objectives of the study, namely analyzing and examining the factors that influence service innovation in hospitals. Most of the literature analyzed uses the literature review method or literature review. As for the results obtained from the analysis of several literature, there are several activities that the hospital can do such as having a good communication system with members in the hospital organization, especially between leaders and members, empowering members and providing an appropriate and fair reward system so that the organization is strived for. experience change by accepting service innovations. In addition, the existence of the hospital's internal marketing policy increases employee satisfaction and loyalty. If employees are satisfied, it will influence a hospital to increase innovation in its services. There is also a need for a transformational leadership style for hospital leaders. If management in the hospital adopts a transformational leadership style, the organization's ability to increase to create innovation and make the organization experience growth and progress.

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