

An Analysis of the Effects of Human Resources Management on Healthcare Innovation in Hospital: A Scoping Review

Atikah Balqis Ferry¹, Indahwaty Sidin¹, Atjo Wahyu²

Email: studybal@yahoo.com

¹Hospital Management Department, Faculty of Public Health, Hasanuddin University, Indonesia

²Department of Occupational Health and Safety, Faculty of Public Health, Hasanuddin University, Indonesia

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Abstract

In many health care systems around the world, increasing attention is focused on Human Resource Management (HRM). HRM is currently manifested as a key element of successful innovation because the human element is involved in the entire innovation process. Innovation is important in terms of public services, for example service innovation using information technology so as to increase efficiency and effectiveness in providing services. This study aims to analyze the effect of HRM on health service innovation in hospitals. This research method is a scoping review. The results of the research are from the literature search that discusses the effect of HRM on innovation in health services in hospitals. The types of innovations supported by HRM are HRM Practices, Knowledge Management, Humble Leadership, Green HRM, Crisis Management Theory, Clinical Directorates Model, and E-Medical services, E-Nursing services, and E-Administrative Services.

Keywords: Human Resources Management, Human Resources Innovation, HRM in Hospital

Introduction

The existence of human resource management is very important for organizations in managing, organizing, managing, and using available human resources so that they can function effectively and efficiently. For organizations, human resources are valuable assets that require good management and maintenance. This is because human resources will affect other resources in the organization (Astuti, 2018).

In many health care systems around the world, increasing attention is focused on Human Resource Management (HRM) (Kabene et al., 2006). The hospital is a service business, and the product is intangible and originates with the service provider, in this instance the officer or human resources. Human resources play a critical role in both the production and delivery of services. Human resources becomes a point of distinction with the goal of adding value and establishing a competitive edge for service businesses (Falih, 2017).

HRM is the application of management concepts to the organization and management of people inside a company. Human resource management encompasses a variety of management responsibilities, including recruiting, training and development, wage/salary administration, promotion administration, and social security and labor welfare (Aswathappa, 2010; Negi, 2013). The notion of human resource management evolved as the efficient utilization of human resources to ensure an organization's success (Zhu et al., 2007).

Human resource management methods are critical for companies' ability to influence and mold human attitudes, behaviors, and abilities, which is critical for businesses' ability to create innovations that align with their aims (Chen & Huang, 2009). Through the employment of suitable recruiting and selection strategies, hospitals may foster a successful health care culture (Fried, Gates, & Masselink, 2011). As a result, it is clear that the recruiting and selection process has a direct effect on organizational success (Mohammad et al., 2020).

The establishment of human resource management policies that are aligned with the strategy is complemented by a strong commitment to promoting innovation in order to increase the organization's competitiveness. It is becoming more obvious that innovation does not just occur as a result of new ideas, but also as a result of their efficient organizational execution. Any program, strategy, or practice in human resource management that aims to alter employee attitudes and behaviors that members regard as novel (Kossek, 2006). According to Jiménez-Jiménez & Sanz-Valle (2008), the primary practices that drive innovation include attracting, acquiring, and keeping workers that exhibit innovative characteristics (Maier et al., 2014).

The influence of human resource management on organizational and individual performance has emerged as a central study theme in the discipline in recent decades, as awareness of the potential of human resources and the need for managerial direction have grown. As a result, a growing body of research demonstrates the favorable correlation between human resource management and performance (Guest, 1997). Seeing that the role of HRM includes having an important role in hospitals in managing human resources in practice, growing employee attitudes and behaviors needed to stimulate and support innovation. However, there are still things that need to be explained regarding the role of HRM in innovation so that more exploration is needed.

A number of studies have investigated the decline in outcomes of medical innovations and their consequences. This decline is again evident when innovation is questioned, whether as a result of repeating treatments in the same patient or being applied to other patients or other therapeutic indications. This low innovation is associated with unwanted impacts and possible problems that tend to reduce the patient's quality of life (Djellal & Gallouj, 2007)

Methods

This research was conducted with a review method. The design of this research is Scoping Review. This research will be conducted from December 2020 to January 2021, by searching for information sources through online databases (bibliographic searching), namely, including in international journals: Science Direct, Google Scholar, and PubMed. The keyword searches used were human resources management, human resources innovation, and HRM in hospital. The inclusion criteria in this review were 1) Population: hospital. 2) Concept: hospital innovation. 3) Context: human resources management. 4) Types of review include; with a quantitative, qualitative and review design, published over the last 5 years starting January 1, 2016, in English. 5) Literature will be excluded if the concepts discussed are not published in journals.

Initial searches were conducted from online databases relevant to the topic via Science Direct, Google Scholar, and PubMed. A search was conducted on this source and retrieved data published from January 1, 2016.

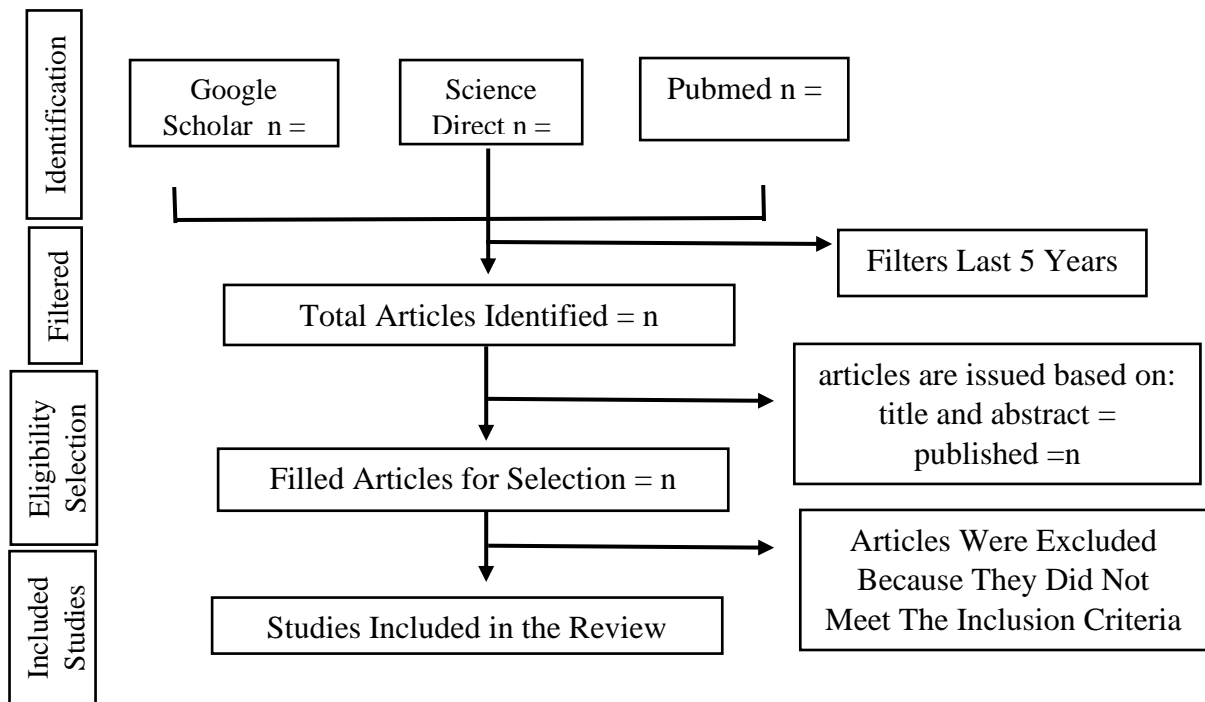


Figure 1. PRISMA Flow Diagram

Using keywords identified by searching in online databases. The keywords used are; 1) Population: hospital. 2) Concept: Hospital innovation. 3) Context: human resources management. Trace the reference list of identified literature that can be included as additional sources. In analyzing, the authors classify papers that explain the effect of HRM on health service innovation in hospitals.

Results and Discussion

Based on the selection results from several article sources based on keywords, Google Scholar is 2,490, Science Direct is 1,473, and Pubmed is 1,679. Then from the total initial search, filtered by year of publication starting from the last 5 years the number of articles obtained was 1,984. Then, the selection of published articles was based on the title and abstract, as well as duplication that did not match so that it became 86 articles. Of the 86 articles, they were excluded based on the inclusion criteria to 16 articles. The steps in data extraction can be seen in Figure 2

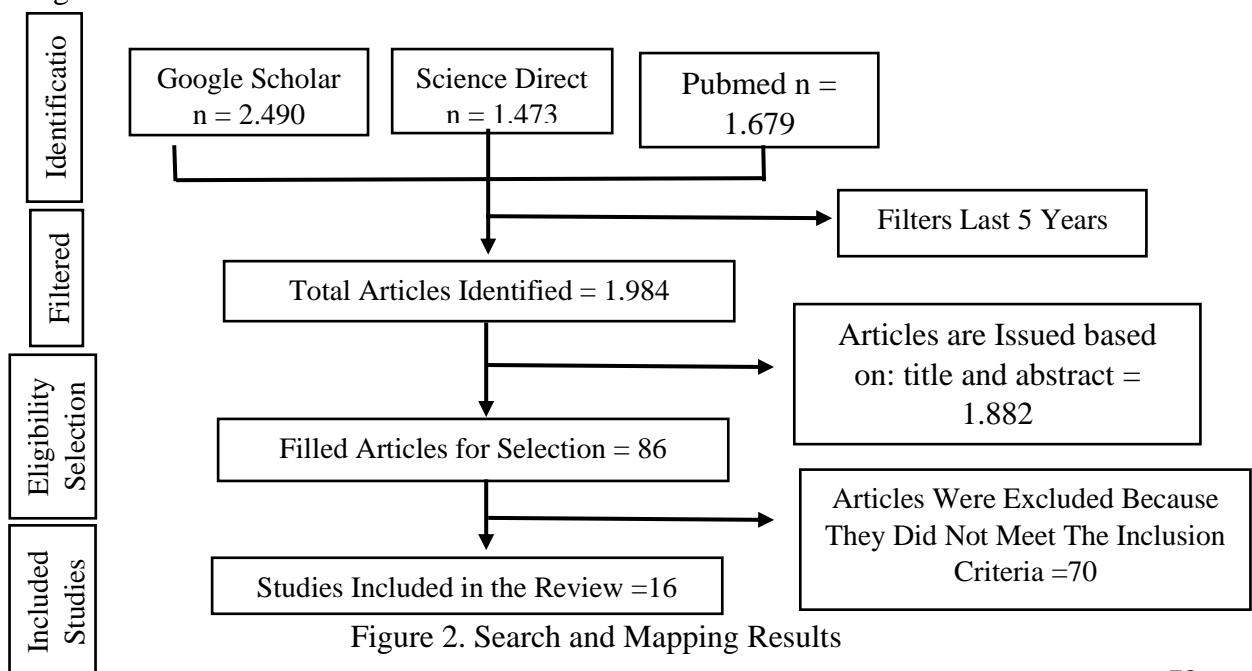


Figure 2. Search and Mapping Results

Table 1. Literature Data Matrix

Title	Author/Year	Country	Purpose	Population/Sample	Methods	Results	Type of Innovation	Description
<i>The Influence of Strategic HRM Implementation on Innovation Performance with The Knowledge Management Capacity as A Mediator In Public Hospital</i> Zainoel Abidin	(Zubir, Syarifudin, Iskandar syah, 2020)	Indonesia	See the effects of HRM Strategic and knowledge management on innovation performance	155 staff at RSU Zainoel Abidin	Quantitative	Strategic human resource management also has a substantial impact on innovation performance through knowledge management. The involvement of knowledge management variables works as a partial mediator in this scenario..	<i>Process Innovation</i>	<i>Knowledge management</i>
<i>Implementation of Human Resources Competency in Nursing Services Field in Industrial Revolution 4.0 Era: A Study at Regional General Hospital of Klungkung</i>	(Wayan & Putra, 2020)	Indonesia	Obtaining an overview of the implementation of human resource competencies in the field of nursing services in the era of industrial revolution 4.0 in Klungkung Hospital.	Board of Directors, Head of nursing services, Nurses, Patients / families who get nursing services in Klungkung Hospital.	Qualitative	The study's findings indicated that the nurse exercised her competence well. Hospitals have also adopted nursing competences in line with the industrial revolution 4.0 age, such as via the utilization of current application systems. Additionally, the hospital arranges education and training, as well as the socialization of training outcomes, as part of its efforts to develop human resources and improve service quality in the industrial revolution 4.0 age.	<i>Product Innovation</i>	<i>E-Medical Services, E-Nursing Services, and E-Administrative Services.</i>
<i>Employee Innovation Behavior in Health Care</i>	(Ramli, 2020)	Indonesia	Analyze the influence of humble Leadership on employee innovation behavior.	100 employees of private hospitals spread throughout Indonesia.	Qualitative	Humble leadership has an important role to play most significantly on employee behavior through core self-evaluation of innovation. The results of this study should be utilized by human resource management.	<i>Process Innovation</i>	<i>Humble Leadership</i>
<i>Role of Strategic Human Resource Management in Crisis Management in Australian</i>	(Kendrick, Bartram, Cavanagh, Burgess, 2017)	Australia	Examine strategic human resource management (SHRM) activities in two hospital	2 Hospitals in greenfields.	Qualitative	Hospitals who employed CMT well during the first 12 months were found to be more'successful' than hospitals that did not employ	<i>Process Innovation</i>	<i>Crisis Management Theory (CMT)</i>

<i>Greenfield Hospital Sites: A Crisis Management Theory Perspective</i>			cases relative to their approach to the success of the greenfieldsite.			CMT successfully. The project's success' was defined as the hospital's ability to combine activities without attracting unwanted public attention after a 12-month period.		
<i>The Impact of Green Human Resource Management on Organizational Environmental Performance in Jordanian Health Service Organizations</i>	(Rawashdeh, 2018)	Jordan	Explore the relationship between green human resource management (HRM) practices, including green recruitment and selection, green training and development, and green awards, and environmental performance within Jordanian health care organizations.	Hospital Managers in 110 eco-friendly hospitals.	Quantitative	Green human resource management is being implemented in Jordanian hospitals; the highest correlations are with recruiting and selection, while the weakest are with training and development.	<i>Process Innovation</i>	<i>Green HRM</i>
<i>Humble Leadership and Innovative Behaviour among Chinese Nurses: The Mediating Role of Work Engagement</i>	(Yang, Zhou, Wang, 2019).	China	Knowing the influence of humble leadership on innovative behavior among Chinese nurses and to test the mediation role of work engagement in this relationship.	Nursing staff from a hospital in northwestern China.	Quantitative	Positive and significant modest leadership is connected with creative nursing behavior and job engagement (p0.01). Additionally, job engagement serves as a moderator between modest leadership and inventive conduct.	<i>Process Innovation</i>	<i>Humble Leadership</i>
<i>HRM and Innovative Work Behaviour: A Systematic Literature Review</i>	(Bos-Nehles, Renkema, Janssen, 2017)	Dutch	Determine best HRM practices for improving innovative work behavior (IWB), to understand theoretical	27 journal articles.	<i>Systematic Review</i>	Training and development, incentives, job stability, autonomy, work composition, work demands, and feedback are the greatest human resource management	<i>Process Innovation</i>	<i>HRM Practices</i>

			reasons for this, and to find mediators and moderators in the relationship between HRM and IWB practices.			techniques for increasing IWB.		
<i>HRM Practices, Knowledge Sharing, Innovation Capability and Firm Performance in Hospitals</i>	(Sengottuvel & Aktarshah, 2016)	India	Testing the relationship between HRM Practice, Knowledge Sharing, Innovation Capabilities and Company Performance .	4 Hospitals in Tiruchirappalli City	Quantitative	Of the five human resource management practices, four were found to be significant predictors of knowledge sharing behavior, including recruitment and selection, compensation and awards, teamwork, and training and development, while nurse knowledge sharing behavior was found to be a significant predictor of hospital innovation capabilities. Additionally, it was shown that Innovation Capabilities are major indicators of a company's performance.	<i>Process Innovation</i>	<i>Knowledge Sharing</i>
<i>HRM Practices and Organizational Change: Evidence from Italian Clinical Directorates</i>	(Gabutti & Morandi, 2018).	Italia	Explore the level of implementation of innovative Human Resource Management (HRM) practices in CDs.	33 Rs of Italy	Quantitative	The overall degree of implementation of human resource management methods is still a little short of theoretically excellent and complete execution, particularly when we consider the significant time lag since the reforms took effect in the sector. Nonetheless, the findings open the way for critical concerns concerning the CD model's usefulness.	<i>Process Innovation</i>	<i>Clinical Directorates</i>
<i>Effect of Human Resource Management</i>	(Athman & Paul, 2019).	Kenya	Find out how HRM practices affect	150 workers at the RSU in Lamu.	Quantitative	HR planning has a significant and positive impact on	<i>Process Innovation</i>	<i>HRM Practices</i>

<i>Practices on Employees Performance in Public Hospitals in Kenya, A Case of Lamu County</i>			employee performance at public hospitals in Kenya, with a case study in Nairobi County.			employee performance.		
<i>Role of Human Resource Management in Employees Performance and Satisfaction of Selected Hospitals in India – A Strategic Perspective</i>	(Ojha & Sinha, 2018).	India	Measure the perceived effectiveness of HRM practices in the healthcare sector and measure the impact hrn practices have on employee performance in the healthcare sector and compare HRM practices in public and private hospitals.	660 public and private hospital staff in India.	Quantitative	The practice of public hospital HRM is more effective than private hospitals and there are significant differences in perceptions of the effectiveness of public and private hospitals.	<i>Process Innovation</i>	<i>HRM Practices</i>
<i>Human Resource Management and Organizational Performance: The Mediating Role of Social Exchange</i>	(Mohammad, Darwish, Singh, Khassawneh, 2020).	Jordan	Explore the impact of specific HRM practices on organizational performance in the Emerging Markets of the Middle East.	HR Manager & Head of Hospital in Jordan (85 out of 150 RS).	Quantitative	Recruitment, training, and promotion from within have a positive and significant relationship with organizational-level performance. Awards and perks are not significantly related to the performance of the organization.	<i>Process Innovation</i>	<i>HRM Practices</i>
<i>HRM Issues and Challenges in Health Care Units in India</i>	(Abhinandan, Chetana, Bangera, 2018).	India	Assessing the processes and practices of HR Management in major hospitals in India, Knowing the impact of HR Management on the healthcare unit.	Secondary data.	Kualitatif.	LLack of staff satisfaction, a lack of commitment and initiative, a lack of team spirit, poor working conditions, staff shortages, a shortage of skilled personnel, high turnover, and absence and conflict between staff members are the primary challenges confronting hospital administrators in relation to human resource management, which will be addressed	<i>Process Innovation</i>	<i>HRM Practices</i>

						through the implementation of efficient and effective human resource management practices.		
<i>A Study on HRM Practices of Public And Private Hospitals in Amaravathi Capital Region: A Comparative</i>	(Nallamothu & Battu, 2019).	India	Identify dimensions of HRM practices in specific hospitals and analyze HRM practices with demographic factors in specific hospitals.	500 respondents from public and private hospitals in Amaravathi city.	Quantitative	There is a significant impact of HRM Practice in certain hospitals.	<i>Process Innovation</i>	<i>HRM Practices</i>
<i>Human Resource Management, Complementarity and Hospital Performance</i>	(Ali, Salehnejad, Kawalek, 2020).	England	Further investigate the role of human management practices through recruitment, development and management of employees as human resource management (HRM) practices.	Data on HRM practices is taken from <i>NHS Staff Surveys</i> (NSS).	Quantitative	The effects of individual HRM practices cannot be determined. Workplace flexibility improves performance only if the organization effectively manages employee ideas, communication and feedback and implements a well-designed and adequate incentive system.	<i>Process Innovation</i>	<i>HRM Practices</i>
<i>The Organizational Aspect of Human Resource Management as a Determinant of the Potential of Polish Hospitals to Manage Medical Professionals in Healthcare 4.0</i>	(Buchelt, Wronka, Dobrowolska, 2020).	Poland	Analyze and evaluate the involvement and role of HRM's key actors, such as line managers and human resources specialists (HR departments) in strategic healthcare entities, namely hospitals.	285 Hospitals in Poland.	Quantitative	The participation and engagement of line managers and human resource professionals is critical in determining whether hospitals are capable of meeting Healthcare 4.0 standards successfully.	<i>Process Innovation</i>	<i>HRM Practices</i>

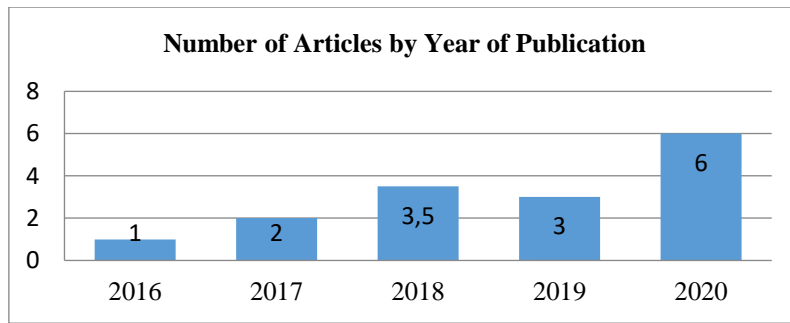


Figure 3. Number of Articles by Year of Publication

Overall the number of articles analyzed is 16 articles that meet the inclusion criteria can be seen in table 1. Based on the results of the analysis of the paper, the number of literature analysis fluctuated from the year of publication. Meanwhile, in Figure 4, it appears that most of the articles published come from two countries namely Indonesia and India.

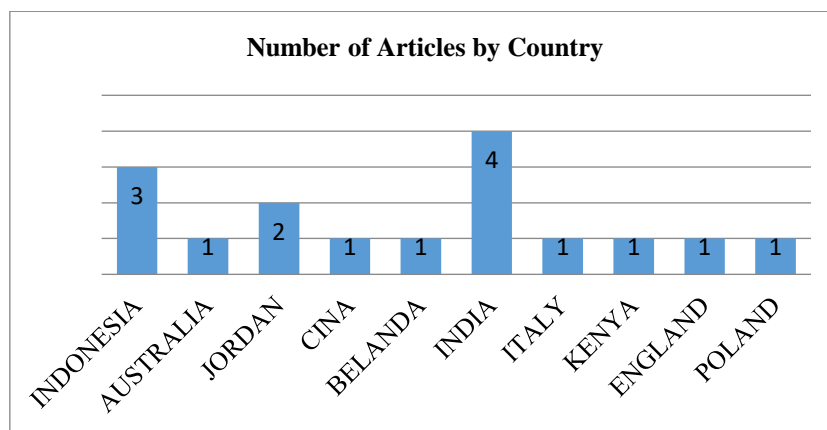
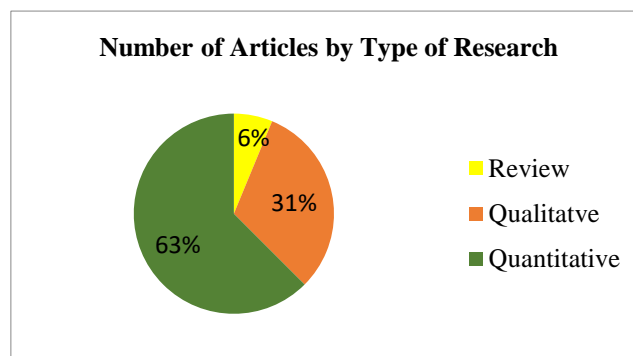


Figure 4. Number of Articles by Country

Furthermore, writer of group articles by research type and can be seen in Figure 5.



In Figure 5 describing the number of articles based on the type of research, most of the research methods of articles analyzed using quantitative methods are 63%, Then qualitative methods as much as 31%, and review methods 6%. Then, the authors perform a mapping of article search results based on the innovation type in Table 2.

Table 2. Mapping Types of Innovations Influenced by Human Resources Management (HRM) in Hospitals

No.	Influence Of Hrm	Types of Innovations	Source
1.	HRM Practices	Process Innovation	[7], [10], [11], [12], [13], [14], [15], [16]
2.	Knowledge Management	Process Innovation	[1], [8]
3.	Humble Leadership	Process Innovation	[3], [6]
4.	Green HRM	Process Innovation	[5]
5.	Crisis Management Theory (CMT)	Process Innovation	[4]
6.	Clinical Directorates (CD) Model	Process Innovation	[9]
7.	E-Medical services, E-Nursing services, dan E-Administrative Services	Product Innovation	[2]

Based on the articles analyzed, 7 influences of Human Resources Management (HRM) on health care innovation in sa kit home, can be seen in Table 2. After conducting the author's search and mapping phase, 7 findings will be obtained which will then be explained about the influence of Human Resources Management (HRM) on health service innovation in hospitals.

Human Resources Management (HRM) Practices

Human Resources Management (HRM) has an impact via process innovation, namely via Human Resources Management (HRM) Practices. Human resource management strategies tend to foster work cultures and situations in which workers have a strong commitment to the company (a positive attitude) and work diligently to attain organizational objectives. Cherif, 2020; Faiza et al., 2019).

The technique of ability-enhancing human resource management, namely "training and development," has been shown to have a beneficial effect on Innovative Work Behavior (IWB) (Knol & Van Linge, 2009; Pratoom & Savatsomboon, 2012; Zhang and Begley, 2011). "Rewards" are a kind of human resource management approach that increases motivation. At IWB, it has been shown that rewarding workers increases employee engagement (Bysted and Jespersen, 2014; Sanders et al., 2010; Zhang and Begley, 2011).

Based on the explanation of the above results from eight journal articles on HRM Practices (Bos-Nehles et al., 2017; Athman & Paul, 2019; Ojha & Sinha, 2018; Mohammad et al., 2020; Abhinandan et al., 2018; Nallamotheu & Battu, 2019; Ali et al., 2020; Buchelt et al., 2020), so I as a researcher conclude that HRM Practices are one of the things that become the innovation process in hospitals. Implementation of HRM Practices can create commitment among employees to achieve organizational goals and innovative work habits.

Knowledge Management

Human Resources Management (HRM) has an impact on process innovation, namely Knowledge Management. According to Scarborough et al. (1999), knowledge management is any method or practice of producing, collecting, collecting, sharing, and using information, regardless of its location, in order to improve learning and performance in companies (Armstrong, 2006).

To foster innovation, businesses may use human capital to enhance organizational knowledge in order to generate new goods and services (Okay, Walumbwa and Myers, 2012). Randeree (2006) asserts that knowledge management is becoming a more strategic and critical function

in a growing number of organizations and corporations, recognizing that competitiveness is contingent upon effective management of intellectual resources (Zubair et al., 2020).

Based on the explanation of the results above from two journal articles on Knowledge Management (Zubir et al., 2020; Sengottuvel & Aktarsha, 2016), I as a researcher conclude that Knowledge Management is one of the things that becomes an innovation process in hospitals. Knowledge management creates human resources with intellectuals who are part of the process of innovation.

Humble Leadership

Human Resources Management (HRM) exerts influence via process innovation, namely Humble Leadership. A manager's duty in the area of human resources management (HRM) at a hospital must be to foster an attitude of humility in order to foster creative behavior among nurses. With an objective assessment of their limits and vulnerabilities, humble leaders tend to consider innovation failures as natural (Hu, Erdoan, Jiang, Bauer, & Liu, 2018; Yuan et al., 2018), which may actually result in increased growth. Numerous novel activities among nurses (Yang et al., 2019).

Based on the explanation of the results above from two journal articles regarding Humble Leadership (Ramli, 2020; Yang et al., 2019), I as a researcher conclude that Humble Leadership is one of the things that becomes an innovation process in hospitals. Humble leadership fosters more innovative behavior among nurses.

Green Human Resources Management (GHRM)

Human Resources Management (HRM) exerts impact via process innovation, namely via Green Human Resources Management (GHRM). According to Matahapati (2013), GHRM adapts many human resource activities such as recruiting and selection, training and development, remuneration and incentives, and performance assessment by ensuring that workers understand and support green behavior (Rawashdeh, 2018).

Human resource management is critical in recruiting and maintaining outstanding green professionals with specialized skills and experience in green human resources. Individuals with green talents and expertise deserve recognition for their environmentally innovative activities or performance (Rawashdeh, 2018).

Based on the explanation of the results above from a journal article regarding Green Human Resources Management (GHRM) (Rawashdeh, 2018), I as a researcher conclude that Green HRM is one of the things that becomes an innovation process in hospitals. Green HRM is a very important strategic tool to achieve the goal of improving environmental performance and innovative human resources.

Crisis Management Theory (CMT)

The influence of Human Resources Management (HRM) in the form of process innovation, namely, Crisis Management Theory (CMT). HRM plays a role in improving the responsiveness, skills, and professional capacity of human resources in hospitals in dealing with crises effectively. According to Fink (1986), CMT is about managing crises effectively to ensure business continuity. Important factors to consider in effective crisis management are accurate identification of crisis indicators and timely response, before disaster risk increases. In operations there is a need for management to be proactive rather than reactive and to train frontline employees to assist management professionals in their efforts reduce crisis risk (Kendrick, et al., 2017).

Based on the explanation of the results above from a journal article regarding Crisis Management Theory (CMT) (Kendrick et al., 2017), I as a researcher conclude that Crisis Management Theory (CMT) is one of the things that becomes an innovation process in hospitals. The role of HRM is to be the initial impetus for team building with good solidarity and innovation by managing crises effectively.

Clinical Directorates Model

The influence of Human Resources Management (HRM) in the form of process innovation, namely. Clinical Directorates (CD) Model. The Clinical Directorates Model originated in the USA (John Hopkins` Memorial Hospital, 1973) and was influenced by the need to involve physicians in management for effective performance and resource management. In exchange for the freedom to manage their own affairs, physicians must accept responsibility for financial resources. The clinical directorate is responsible for managing medical and other staff, setting performance targets and achieving agreed financial goals (Burca, et al. 2008).

Based on the explanation of the results above from a journal article regarding the Clinical Directorates (CD) Model (Gabutti & Morandi, 2018), I as a researcher conclude that the Clinical Directorates (CD) Model is one of the things that is an innovation process in hospitals. In the Clinical Directorates (CD) this model by involving doctors in hospital management will develop an organization for the implementation of innovation, if supported by special training for clinical managers.

E-Medical Services, E-Nursing Services, dan E-Administrative Services

In this scenario, HRM has an effect on service innovation in hospitals via product innovation, namely in the areas of e-Medical services, e-Nursing services, and e-Administrative services. The study's findings indicated that adopting a computer-based system improved the quality and completeness of documentation, as well as its legality, relevance, and decision-making skills. Additionally, nurse satisfaction increased as a result of the computer's simplicity of use and efficiency (Hariyati, 2019).

According to the explanation of the results above from a journal article about E-Medical services, E-Nursing services, and E-Administrative Services (Wayan & Putra, 2020), I conclude as a researcher that E-Medical services, E-Nursing services, and E-Administrative Services are all examples of innovative products in hospitals. The application of the hospital service system in the 4.0 era, namely, innovation in the form of developing "E" digitization which makes it easier for health workers to focus more on providing services to patients

Conclusion

Based on the results of the above research, it can be concluded several things, The influence of HRM on service innovation in hospitals is: product innovation, process innovation, and administrative innovation. Service innovation in hospitals in the form of "process innovation", namely: HRM Practices, Knowledge Management, Humble Leadership, Green HRM, Crisis Management Theory, and Clinical Directorates Model. Innovation of services in hospitals in the form of "product innovation", namely: E-Medical services, E-Nursing services, and E-Administrative Services. The influence of HRM on service innovation in hospitals has been shown to have a positive impact directly.

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