JURNAL PENDIDIKAN KEPERAWATAN INDONESIA

Journal Homepage: http://ejournal.upi.edu/index.php/JPKI

The Effect of Knowledge Management in Healthcare Services: A Systematic Review

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A B S T R A C T

The quality of service at health facilities needs to be improved, one of the main keys is the service provided by health workers. The aim of this systematic review was to analyze the effectiveness of knowledge management in healthcare. The systematic review was carried out in March-April 2020 with a range of article search times from 2016-2020 using 5 electronic databases (Scopus, PubMed, Science Direct, CINAHL and ProQuest). The Center for Review and Dissemination and the Joanna Briggs Institute Guideline were used to assess the quality and PRISMA's checklist for this review guide. The literature search described four keyword groups based on Medical Subject Heading (MeSH) and the search description was (knowledge management*' OR 'SECI knowledge management') AND ('health care' OR hospital). The article searched was found 13 articles suitable with the eligibility criteria, the results of the systematic review found that knowledge management had the effectiveness to provide information and knowledge processes, improve decision-making abilities, improve performance and quality of health services and increase organizational effectiveness. As health service providers, hospitals and other health care institutions must continue to improve the quality of services. By improving the quality of services, it is expected to be able to answer the demands of the community to always provide optimal health services. With the application of good knowledge management, ideas and creativity from the workforce will be created in creating health service innovations.

ARTICLE INFO

1. INTRODUCTION

The health service process is a core service or primary service in hospital services determined by the human resources in it. Resource management in service industries such as hospitals and other health services needs to be considered when environmental changes are very fast and complex (Riyan M. Faris, Heti Mulyati, 2020). The human resources in the hospital include all medical and non-medical personnel. To realize the creation of quality health services, it requires health workers who have intellectual, technical and interpersonal abilities, working based on standard practice (Modest, 2020). If the quality of health services has reached a good and comprehensive category, then the degree of public health will also increase (Damtie & Getahun, 2017; Wung et al., 2016). The quality of health services provided by health workers is very important for the quality provided by hospitals to achieve patient satisfaction (Kaur et al., 2020; Olalubi & Bello, 2020).

One of the indicators of service quality at health facilities is the quality of nursing services and patient satisfaction, if the quality of nursing services can run well, then patient satisfaction will also increase and increase public confidence in the quality of health services provided (Kim & Han, 2019; Samad Hosseini et al., 2019). The requirements of health service are stated as quality services. They can provide satisfaction to service recipients if the implementation of the proposed or determined service, which includes an assessment of patient satisfaction regarding the availability of facility, standard of procedure, continuity of caring, patient's acceptance, service achievement health, affordability, the efficiency and quality of health services (Karamat et al., 2019; Tian et al., 2018).

Until now, the quality of services provided by nursing is still not well standardized and not maximized (Ali et al., 2017). The form of service provided still depends on various factors that cause differences in providing care. In some health facilities that still do not provide welfare to nurses, it will cause nurses' performance to be less good, so that the nursing care provided is also not wholehearted (Zhang et al., 2020). The prevalence of work problems is reviewed globally in several hospitals in Indonesia which is still less than standard, based on research conducted by (Zhang et al., 2020) showing that the performance data of hospitals in several provinces in Indonesia is 45% with poor performance. This is far from the standard value set by the Ministry of Health of the Republic of Indonesia in 2013 with the ideal figure to be achieved is 70-80%.The low quality of the performance of nurses can result in efforts to maintain patient safety by nurses being less than optimal (Nguyen et al., 2018).

The quality of nursing services is very important to improve so that hospital services also increase community satisfaction (Ali et al., 2017). The number of problems that exist in organizations within health agencies that make the quality of health services unable to develop, one of which is increasing the ability and knowledge of its human resources. Improving the quality of nursing care can be through programs from external and internal nurses, it is very important to foster motivation and caring from nurses (Kim & Han, 2019). It is necessary to intervene for medical personnel in improving the quality of service and employee performance, one of which is by using knowledge management (Riyan M. Faris, Heti Mulyati, 2020). Knowledge management is one method that can be applied in improving the understanding, quality, quantity, responsibility and ability of health workers. Knowledge management is a process to seek, find and share knowledge (skills, skills, experiences and networks) possessed by individuals in an organization

to their organizations and other individuals within the organization (Kim & Han, 2019; Shamim et al., 2019). Based on the results of research conducted by (Mohan & Gomathi, 2015; Nursing and Midwifery Council, 2018), it shows that this knowledge management approach can make nurses' performance more optimal and in accordance with organizational goals. So that, researchers are interested in doing a systematic review to find out the Effect of Knowledge Management in Healthcare Services.

2. METHOD

Literature Search Strategy

The literature review strategy used the protocol and recommendations from the Preferred Reporting Item for Systematic Reviews and Meta-Analysis (PRISMA) checklist to determine study options and the Center for Review and Dissemination and the Joanna Briggs Institute (JBI) Guideline as a guide in assessing study quality. The PICOS question format (P = population, I = intervention, C = comparison, O = outcome, S = study type) was used as the search strategy in the review questions described in Table 1. We searched for relevant articles that matched the review in March-April 2020 with a vulnerable article search time of 2016-2020 using 5 electronic databases (Scopus, PubMed, Science Direct, CINAHL and ProQuest) to find articles relevant to the review. We also included manual searches for bibliographic references of selected articles and gray literature databases to minimize publication bias. The literature search described four keyword groups based on Medical Subject Heading (MeSH) and the search description was (knowledge management*' OR 'knowledge management SECI') AND (effect OR impact OR) AND ('health care' OR hospital). The complete search strategy in this review is shown in Figure 1.

Tabel 1. PICOS Framework in Systematic Review

PICOS *framework*	Inclusion Criteria	Exclusion Criteria
Population	Medical personnel working in health services	Studies that do not discuss health services
Intervention	Studies that examine knowledge management interventions provided to respondents, both direct and indirect interventions	Studies that do not address the effect of providing knowledge management interventions on respondents
Comparators	The comparison intervention group used was another intervention or a group that was only observed without intervention	No Exclusion
Outcomes	Studies explaining the effect of knowledge management interventions on medical personnel in health services	The study discuss other interventions
Study Design and publication type	The qualitative case study, Quasi experiment, Mixed-method research design, The study included interpretative case studies, cross-sectional design, Research and Development, Descriptive study	No Exclusion
Publication years	2016 to 2020	No Exclusion
Language	English and Indonesian	No Exclusion

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┌─────────────────────────────────────┐
│  The study was identified from the   │
│  Scopus, PubMed, Science Direct,     │
│  CINAHL and ProQuest                 │
│  databases (n = 84)                  │
└─────────────────────────────────────┘
                 │
┌─────────────────────────────────────┐
│  Articles identified by duplication  │
│  (n = 75)                            │
└─────────────────────────────────────┘
                 │
┌─────────────────────────────────────┐
│  Screening based on title            │
│  identification (n = 68)             │
└─────────────────────────────────────┘
                 │
┌─────────────────────────────────────┐        ┌────────────────────────────────────────┐
│  Screening based on abstract    ─────┼──────> │  Exclusion (n = 26)                     │
│  identification (n = 42)             │        │  Populations                            │
└─────────────────────────────────────┘        │  Does not focus on health care services │
                 │                              │  (n = 5)                                │
                 │                              │                                         │
                 │                              │  Intervention                           │
                 │                              │  Intervention is not appropriate /      │
                 │                              │  specific with knowledge management     │
                 │                              │  (n = 12)                               │
                 │                              │                                         │
                 │                              │  Outcome                                │
                 │                              │  Did not discuss interventions for      │
                 │                              │  knowledge management impact (n = 9)    │
                 │                              └────────────────────────────────────────┘
┌─────────────────────────────────────┐        ┌────────────────────────────────────────┐
│  Assessment based on full text  ─────┼──────> │  Exclusion (n = 24)                     │
│  and eligibility criteria (n = 18)   │        │  Populations                            │
└─────────────────────────────────────┘        │  Does not focus on health care services │
                 │                              │  (n = 4)                                │
                 │                              │                                         │
                 │                              │  Intervention                           │
                 │                              │  Intervention is not appropriate /      │
                 │                              │  specific with knowledge management     │
                 │                              │  (n = 10)                               │
                 │                              │                                         │
                 │                              │  Outcome                                │
                 │                              │  Did not discuss interventions for      │
┌─────────────────────────────────────┐        │  knowledge management impact (n = 10)   │
│  Articles that are suitable and can  │        └────────────────────────────────────────┘
│  be used (n = 13)                    │
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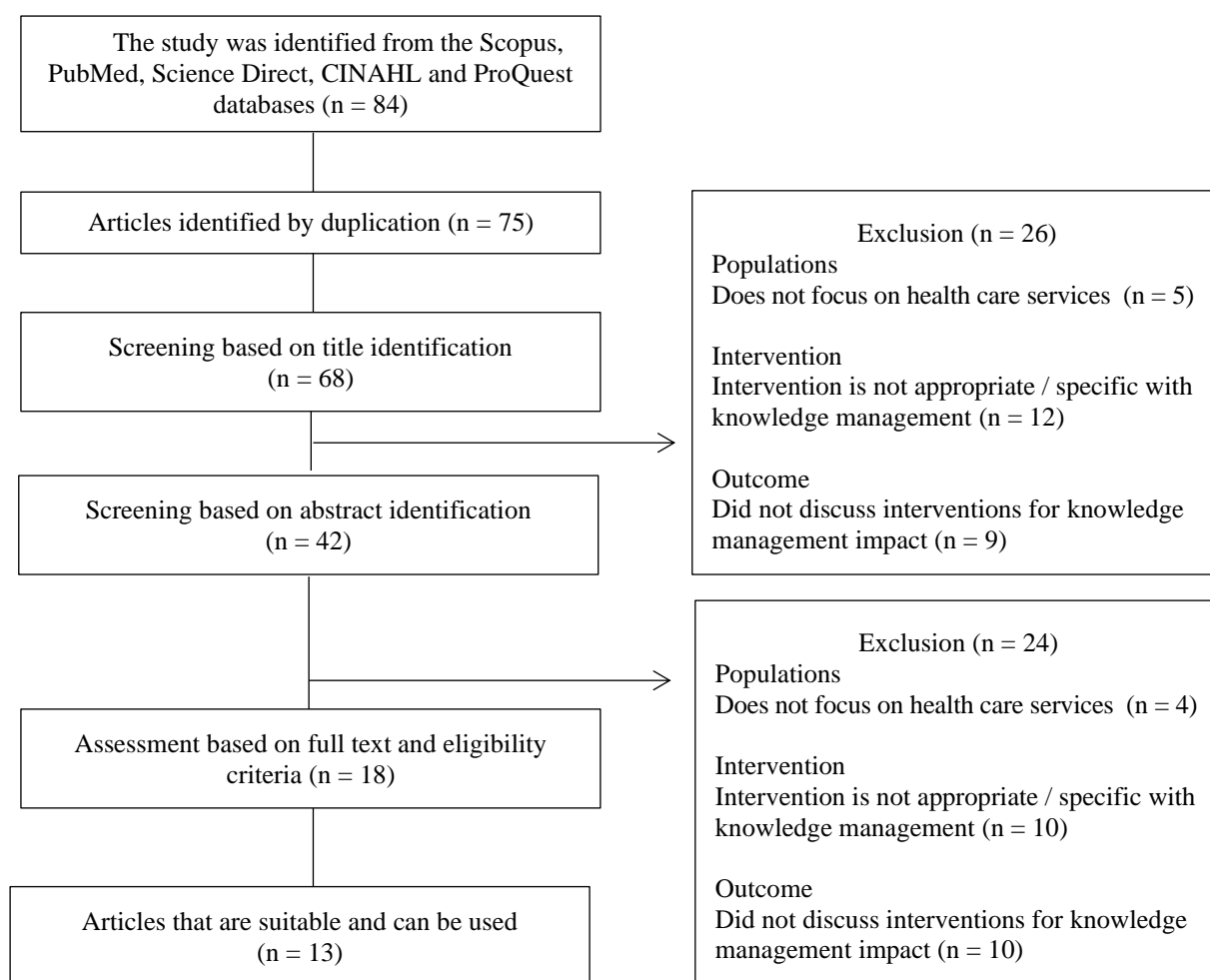
Figure 1. Flow Chart of Literature Search

Study Selection

The article searched was found 84 studies, after checked for duplication there were 75 of the same articles and 68 articles left after duplication excluded. Article selection was performed by two reviewers independently and the disagreement of the study was solved by team discussion. The authors screening based on the title, theme of systematic review, abstract and full text, and 42 articles was left. After assessing the eligibility criteria there were 13 articles.

Data extraction and quality assessment

Data extraction was carried out by the research team independently, and the data was reviewed by the research team. The relevant data were extracted, including: author, year, country, research aim, theoretical framework, study design, sample size, sampling method, description of participants, reliability and validity, measurement instruments, analysis and statistical techniques and outcomes. The assessment of the quality of study were used JBI (Joanna Briggs Institute) critical appraisal checklist for cross-sectional and quasi-experimental studies, assessment criteria was given a score of 'yes', 'no', 'unclear' or 'not applicable ', in the last assessment study score was calculated. In the last screening, 13 studies reached a score higher than 50% and were ready for

analysis.

Data analysis and synthesis

Data analysis and synthesis in the studies were described according to study design, study and sample characteristics, country and psychological intervention divided into online and offline intervention.

3. RESULTS

The study quality of each article designated as the source of systematic review was determined based on the quality analysis of The JBI Critical Appraisal Tools and 13 studies that met the criteria for this systematic review, the results obtained were three studies used cross-sectional study, three studies used qualitative case study, three studies used quasi-experimental research design, two studies used mixed-method research design, one studies used research and development design and one studies used descriptive study. Based on these results and the JBI Critical Appraisal checklist can be seen in Table 2, the study that have score more than 50% passed the screening risk of bias. The risk of bias assessment in the study showed because most of the determination of sample size is included by non-probability techniques, the pre-experimental design is conducted in only one group and the results are observed before and after the intervention is given. The high risk of bias is also due to the existence of several other factors that contribute to the psychology of each individual, thus becoming a confounding factor in the study. All studies included in systematic reviews are showed in Table 2.

Tabel 2. The Result of Article

No	Author/Years	Participant	Design	Effect of Intervention	Location
1.	(Känsäkoski, 2017)	30 registered nurses and three mothers and children were interviewed 2009-2011 and the findings were supported with a survey (n=13) and document material.	The qualitative case study	1. Provide information and knowledge processes. 2. Increase decision making ability.	In two Finnish University Hospital Districts
2.	(Fadhillah et al., 2018)	61 respondents	Quasi experiment pre post-test with the control group	1. Improve Job Performance	Jakarta Islamic Hospital
3.	(Ajanaku, 2018)	The total population of registered nurses in UCH is 1192 while that of OAU is 756. Therefore the total population of the study is 1948.	Mixed-method research design	1. Improve Quality of Nursing Care	At the University College Hospital (UCH) located in Ibadan, Oyo State and Obafemi Awolowo University Teaching Hospitals Complex (OAUTHC) located in Osun State, Nigeria
4.	(Bahar & Bahri, 2017)	59 interviews were conducted with doctors and nurses	The study included interpretative case studies	1. Increase Discussion making ability	Hospital in Malaysia

No	Author/Years	Participant	Design	Effect of Intervention	Location
5.	(Hendriks et al., 2016)	74 nurses	Quasi experimental research design	1. Improve Job Performance	Dutch Hospital
6.	(Fadhillah et al., 2020)	120 respondents	Quantitative with cross sectional design	1. Improve Job Performance	Hospital in Jakarta
7.	(Johan Agus Yuswanto & Ernawati, 2020)	100 nurses	Quasi experimental pre-post-test design	1. Improve Quality of Nursing Care	Surabaya Haji Hospital

Tabel 2. The Result of Article (*Advanced*)

No	Author/Years	Participant	Design	Effect of Intervention	Location
8.	(Kurniawan, 2017)	33 hospital administrators in Indonesia (the respondent is the hospital leaders, medical staff, and paramedics).	Case Studies	1. Improve Job Performance	Hospital Services in Jakarta
9.	(Tang, 2017a)	266 respondent	Cross-Sectional	1. Improve organizational effectiveness	In the city-level Grade III Level I Hospital in Shanghai City
10.	(Tian et al., 2018)	352 respondent	Cross-Sectional	1. Improve organizational learning	In Shanghai Huashan Hospital
11.	(Choy, 2017)	216 elderly patients	Research and Development	1. Improve Quality of Nursing Care	The Comfort Nursing Home, Taiwan
12.	(Jang, In-Sook · Park, 2016)	184 nurses	Descriptive study	1. Increase decision making ability	Five General Hospitals Daejeon, Korea
13.	(Wahyanto et al., 2019)	10 nurses consist of Head of Medical Service, Nursing Coordinator and Inpatient Coordinator	Mixed-method research design	1. Improve Quality of Nursing Care	Muji Rahayu Hospital

Study Characteristics

The research in this review was conducted in health institutions, namely 3 studies conducted at Jakarta hospitals, 3 studies conducted in Taiwan namely (In the city-level Grade III Level I Hospital in Shanghai City, In Shanghai Huashan Hospital and The Comfort Nursing Home) (Choy 2017; Tang 2017; Tian et al. 2018), 2 studies conducted in Surabaya (Muji Rahayu Hospital and Haji Hospital) (Fadhillah et al. 2018; Fadhillah, Nursalam, and Mustikasari 2020; Wahyanto, Damayanti, and Supriyanto 2019), 1 study using 2 hospitals namely In two Finnish University Hospital Districts (Känsäkoski 2017), 1 study conducted in a Dutch hospital, 1 research conducted in a Malaysian hospital (Hendriks, Ligthart, and Schouteten 2016), 1 study using 2 hospitals in Nigeria namely At the University College Hospital (UCH) located in Ibadan, Oyo State and Obafemi Awolowo University Teaching Hospitals Complex (OAUTHC) located in Osun State (Ajanaku 2018) and 1 study using 5 hospitals in Korea namely Five General Hospitals Daejeon (Jang, In-Sook · Park 2016). The purpose of this systematic review study was to determine the effect of knowledge management on health services. Based on the results of the study, it is known that the knowledge management provided is mostly done online and a small part of the research is

through direct intervention methods.

Characteristics of Respondents

Respondents in this study were all professional medical personnel and most of the respondents were nurses and doctors in all agencies or where they worked. Research has mentioned knowledge management interventions to improve health services, with the majority of respondents numbering more than 100 respondents. Respondents in this study were on average between 20 - 55 years of productive age and were multi-regional. The gender characteristics of respondents between men and women are almost the same because this study is comprehensive and most of the education levels are diploma and bachelor. Based on information about the perceived quality of health services, more than 40% of the data indicate that they have problems with improving the quality of health services and employee performance, thus requiring knowledge management interventions.

Providing Information and Knowledge Process

Based on research conducted by (Känsäkoski, 2017) knowledge management makes a person manage and identify a type of information in decision making, so that it impacts the policy-making process and the decisions they take to be more responsible and meet future challenges.

The research results conducted by (Tian et al., 2018) that knowledge management will improve the transfer and transmission of knowledge from each employee. Knowledge management also makes employees feel learning and support from the organization, so they are more effective in sharing information, knowledge and experiences of other employees. In addition, employees will not worry or fear about the bad possibilities that will occur in their work careers because the transfer of knowledge between employees makes them more active in their work and it will have an impact on their promotions.

Improve Decision Making Ability

Based on research conducted by (Känsäkoski, 2017) it was found that knowledge management makes a person manage and identify a type of information in decision making so that it has an impact on the policy-making process and the decisions they take to be more responsible and meet future challenges. The study result (Bahar & Bahri, 2017) show that knowledge management makes someone evaluate previous decision making to assess the significance or quality of the results of these decisions. This evaluation is very important because it is to clarify whether a decision has been effective or not, so that the decision avoids negative consequences. The knowledge management helps improve existing knowledge, before making decisions and ensuring that they make the best choice. The results of research conducted by (Jang, In-Sook · Park, 2016) show that knowledge management is one of the most important factors in decision making.

Improve the performance

The research results conducted by (Fadhillah et al., 2018, 2020) found that the performance of nurses in implementing patient safety in the control group who had been given SECI knowledge

management intervention with a caring approach was better and more significant than the control group. In this study, it was shown that in developing a nurse performance model based on SECI knowledge management with a caring approach, the work factor was the main factor that contributed highly to the nurse's performance. This shows that knowledge management has a positive effect on nurse performance.

The research results conducted by (Hendriks et al., 2016) found that tacit knowledge on knowledge management (insight and capacity to understand work processes) is a significant and it showed as a predictor of high nurse performance. The research results conducted by (Kurniawan, 2017) show that social interaction skills, technological capabilities and knowledge management are the most important factors for hospitals to improve management capabilities and employee performance.

Improving the Quality of Health Services

The research result conducted by (Ajanaku, 2018) showed that knowledge management makes an important and effective contribution in providing good health services. The contribution such as awareness about management practices in hospitals, assisting nursing administrators, health policy makers and utilizing knowledge-based resources in nursing care in Nigeria. It can conclude that the productivity and quality health services can be improved. The patient safety model based on Organizational Citizenship Behavior (OCB) and knowledge management has proven to be effective in reducing the incidence of decubitus ulcers in inpatient rooms, in the sense that this model is highly recommended to improve the quality of health services, especially in nursing care (Johan Agus Yuswanto & Ernawati, 2020).

(Choy, 2017) stated that comprehensive service improvement in nursing homes was carried out using a knowledge-based continuous improvement module. This is explained in the performance of long-term care services carried out by staff in nursing homes and the quality of services for the elderly can be examined holistically using a knowledge management-based service quality assessment module. The formation of knowledge using the SECI model in the RSUD Muji Rahayu room showed that 70% of respondents had carried out socialization activities. Socialization has an important role because it is in the description of the tasks that must be carried out by nurses in carrying out nursing care which is the backbone of integrated services in hospitals. The quality of nursing services and the quality of health services are determined by nurses who are competent in their fields, therefore the task of nurses is very dependent on the tacit knowledge possessed by individuals (Wahyanto et al., 2019).

Increase Organizational Effectiveness

The results of research conducted in Taiwan found that knowledge management gives individuals the ability to create good knowledge. Knowledge management can also have a positive effect on organizational culture and positive and significant organizational effectiveness for the healthcare industry (Tang, 2017a).

4. DISCUSSION

Knowledge management is a process of managing knowledge. Knowledge is a mixture of experience, values and contextual information that provides a broad perspective for evaluating and integrating new experiences with information (Machlup et al., 2016). Based on the results of a literature search on health workers, knowledge management has the functions to 1) provide information and knowledge processes, 2) improve decision-making abilities, 3) improve performance, 4) improve the quality of health services and 5) increase organizational effectiveness.

Providing Information and Knowledge Process

Research conducted by (Känsäkoski, 2017) suggests that knowledge management makes a person manage and identify a type of information in decision making. (Tian et al., 2018) also suggests that knowledge management will improve the transfer and transmission of knowledge from each employee. Knowledge management is a process of improving existing knowledge either through the process of discovering new knowledge or through a process of self-reflecting on experiences that have been experienced. This is what is called the knowledge process (Praharsi, 2016). The presence of knowledge management will make it easier to find information and find people who have information that the company needs. This is able to increase the productivity of everyone in the company, so that staff can work more effectively (Andhara, 2018).

The studies and research found above can be concluded that knowledge management is a process of absorption, creation and application of knowledge that, if implemented in organizations or individuals, can provide efficient and effective results and positively impact. With this knowledge management, all parts of the company and organization are expected to be able to gain knowledge and insight related to business, operations, management and information in the technology era, so that companies can compete with the demands of the times. Currently, the application of knowledge management is mostly done in business companies, because it can provide the information contained in the company can be managed fluently. It also can be used to analyse what business strategies and how to take it to increase profits and competitive competition with other companies. In addition, another reason for the many applications of knowledge management carried out in the business field is that existing knowledge can be used to innovate a product.

Improve Decision Making Ability

Knowledge management allows a person to manage and identify a type of information in decision making, so that it impact on the policy processes and decisions they take to take responsibility and face future challenges (Känsäkoski, 2017). Supported by research Bahar and Bahri (2017) suggests that knowledge management makes decisions made more mature because knowledge management applies an evaluation system of previous decision making, so that decision making is avoided from negative impacts or consequences. It also suitable with the research result showed that knowledge management is one of the most important factors in decision making (Jang, In-Sook · Park, 2016).

The decision-making process carried out by individuals and company management will become easier and more effective by using knowledge management. Concepts like this will help them gain access to different opinions and experiences to present more perspectives in the

decision-making process. Thus, the decisions that will be chosen will be more effective and will have a better impact on the company and also on all interested parties (Andhara, 2018). Knowledge Management is able to improve individual abilities in problem solving and decision making (Riyan M. Faris, Heti Mulyati, 2020). They were creating more accurate decision making. Every decision will be born with a very mature thought. Because it was decided based on various important considerations based on experience and information that was reviewed from various important aspects. For example, knowledge sharing is always studying the dynamics of competition in the business and service   industries and the demands that consumers need. That way, the company or institution always focuses on selling only what consumers really like and need.

Improve the performance

Performance is built from the ability of a nurse based on knowledge and professional competence, through knowledge management nurses can increase their knowledge while still managing themselves. The performance of nurses provided by nursing personnel reflects the professionalism of nurses in improving patient safety and satisfaction. This statement is in accordance with research that states that nurses' performance through knowledge management and caring guidance can improve patient safety in hospitals (Fadhillah et al., 2018, 2020). Likewise, the results of the same study suggest that knowledge management has a huge influence on the performance of nurses (Hendriks et al., 2016). The performance carried out by nurses is also supported by caring feelings, social interaction skills, facilities and technology for nurses' self-development. A good nurse's performance is also influenced by the ability and motivation of nurses to carry out their duties, the knowledge of nurses is sufficiently proven that it can bring up the professionalism of nurses in carrying out nursing care wholeheartedly. In line with research on the importance of growing intelligent and professional souls from nurses, it requires a managerial and knowledge approach. The results of several studies above are in accordance with the results of the literature in a systematic review which shows that knowledge management can improve nurse performance through coaching, developing, increasing knowledge of nurses.

Improving the Quality of Health Services

The quality of health services is a priority in hospitals to improve patient safety and satisfaction. Nursing training based on knowledge management can make nurses more capable of self-management, wise in decision making, good planning and able to make strategies in achieving successful nursing care (Ajanaku, 2018). Knowledge management services in inpatient rooms can improve the professionalism of nursing services for patients with decubitus ulcers (Johan Agus Yuswanto & Ernawati, 2020) and services at nursing homes showing a significant quality improvement after being given knowledge management learning (Choy, 2017). The process of knowledge transfer in knowledge management was mentioned in a study, one of which was through socialization and evaluation of the quality of nursing care (Wahyanto et al., 2019). So it can be concluded that knowledge management is a process to seek, find and share knowledge (skills, skills, experience and networks) possessed by individuals in an organization to their organization and other individuals within the organization.

The hospital's task is to create optimal health services and innovations in the form of knowledge management which will later be useful for improving health services. The quality of service will be optimal with the support of the hospital by considering health services from the workforce and human resources in hospitals or other health institutions. The purpose of this knowledge management innovation in health services is to create excellent and complete health services. This innovation is an important thing in creating quality service, it is hoped that patient satisfaction will increase.

Increase Organizational Effectiveness

An organization becomes more effective if the managerial process goes well, good management skills are created from the knowledge of competent nurses. This is in line with research (Tang, 2017b) which states that the knowledge management method can grow optimal knowledge in nurses so as to produce a positive effect on an organization. The main purpose that is formed is that the organization can be effective if the available human resources are also choices, which go through coaching and increasing nurses' knowledge. So that by improving the quality of service and the ability of human resources in the organization, it is expected to be able to answer public questions to always provide optimal health services. With the application of good knowledge management ideas and creativity will be created from the workforce and human resources in creating health services and ultimately in hospitals or other health institutions can develop and be able to compete in providing excellent service.

Limitations

The limitations of this systematic review during the literature collection and summary process are knowledge management interventions carried out on health workers are still too few and only applied in a few countries, in Indonesia there are still not many interventions use this tool, especially in hospitals or other health service agencies. So that the determination of this intervention is more effective cannot be determined. The implementation of tool is also influenced by several factors from each individual, so that the success and effectiveness also depend on the condition of each individual.

5. CONCLUSIONS

Hospitals or other health care institutions can increase innovation in their health services by implementing optimal knowledge management. As health service providers, hospitals and other health care institutions must continue to improve the quality of services. By improving the quality of services, it is expected to be able to answer the demands of the community to always provide optimal health services. The existence of knowledge management in the practice of health workers has great benefits in providing information and knowledge processes, decision-making abilities, improving performance and quality of health services and increasing Organizational Effectiveness.

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